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The phonology and morphology of Kisi

Childs, George Tucker, Ph.D.

University of California, Berkeley, 1988

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The Phonology and Morphology of Kisi

By

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A.B. (Stanford University) 1970
M.Ed. (University of Virginia) 1979
M.A. (University of California) 1982
C.Phil. (University of California) 1987

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THE PHONOLOGY AND MORPHOLOGY OF KISI

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George Tucker Childs

THE PHONOLOGY AND MORPHOLOGY OF KISI

George Tucker Childs

ABSTRACT

This dissertation describes the phonology and morphology of the Kisi language, a member of the Southern Branch of (West) Atlantic. The language is spoken in Guinea, Sierra Leone, and Liberia. After the introduction in Chapter 1 and an overview of the language in Chapter 2, I discuss the phonology of the language. The phonemic inventory has implosives, a full series of nasal compound stops, and a set of labialvelars. The vowels form a symmetrical seven-vowel pattern, and length is contrastive. Syllable structure is ､C(G)V(V)(C), where the only consonants allowed to close syllables are the liquid and two nasals. Kisi is a tonal language with the following tones: Low, High, Extra-High (limited distribution), Rise, and Fall. Tone is used lexically with nouns and grammatically elsewhere, especially within the verbal morphology.

In Chapter 4 I discuss the word classes of Kisi. Besides the basic classes of nouns and verbs, Kisi has a set of adjectives, which is amply supplemented by a productive process of forming adjectives from verbs. There are only a few adverbs but a robust set of

1

ideophones, which category is discussed at some length.

Kisi has a rich morphology. Chapter 5 focuses on the noun class system, consisting of seven noun classes with agreement shown by low numbers, adjectives, demonstratives, and the like. Chapter 6 looks at verbal morphology. Aspect is basic to verbal inflections, although tense, mood, and polarity are also important. Kisi also has four verbal extensions: Causative, Benefactive, Middle, and Plural. The final chapter presents several derivational processes, including compounding.

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Abbreviations used in this work

Non-alphabetic symbols

ə	Mid-central vowel "schwa"
-	1. Morpheme boundary 2. Indicates reduplication in ideophones
+	1. Morpheme boundary in rule formalization 2. Raised register (on tonal level)
*	Ungrammatical
.	Syllable boundary

Alphabetic symbols

Adj	Adjective
Adv	Adverb
Ass	Associative
Aux	Auxiliary
Ben	Benefactive
C	Consonant
Cond	Conditional
Conj	Conjunction
Consec	Consecutive
Cs	Causative
Dem	Demonstrative
Demon	Demonstrative
Dist	Distributive
F	Falling tone
Foc	Focus
Fut	Future
G	Glide
H	High tone
H+	Extra-high tone
Hab	Habitual
Idph	Ideophone
Imp	Imperative
Imperf	Imperfective
Int	Interrogative
L	Liquid (segment level)
L	Low tone (tone level)
Mid	Middle
N	Noun

NCM	Noun class marker
NCP	Noun class pronoun
NKC	Niger-Kordofanian-Congo
Part	Participle
Perf	Perfective
p.c.	Personal communication
Pl	Plural
Post	Postposition
PP	Present Perfective
Prep	Preposition
Pro	Pronoun
Prt	Particle
Prog	Progressive
Q	Question marker
R	Rising tone
Ret	Retinue affix
Sg	Singular
shd	should
TAM	Tense, aspect, and modality
V	Vowel
Vb	Verb
VE	Verb extension

Chapter 1: Introduction

The remarks which follow represent a preliminary effort at characterizing the grammar of the Kisi[1] language. In this section I present background information about both the Kisi people and their language.

1.1 Geographical setting

The Kisi language is spoken by roughly 250,000 speakers (Sapir 1971), most of whom are found in the Republic of Guinea; a third of its present-day speakers reside in Sierra Leone and Liberia.

For Liberia this number has been put at 25,500 in a 1974 survey, representing approximately ten per cent of the total number of Kisi speakers (Dunn & Holsoe 1985:101). Liebenow gives the size of the group with a Kisi ethnic affiliation as 51,318, the date still being 1974 (Liebenow 1987:35).

Present-day political configurations have divided the

---

[1] The Wycliffe Bible Translators list the following as alternative spellings for the name of the language: Kissi, Gizi, Gisi, Kissien (1978:120). Heydorn (1971) suggests that the g-initial spellings may be based on the lack of aspiration associated with Kisi voiceless stops (phonemically, there is no g in the language. In all three countries having large numbers of Kisi people (Sierra Leone, Liberia, and Guinea, the government spelling is "Kissi". The spelling I will use, "Kisi", is closer to the phonemic form of the word and represents the spelling used by the Kisi Literacy Committee.

1

Kisi people into three different countries. Within the

countries the people are further divided into smaller

political and traditional groups. Liberia has one

chiefdom consisting of three clans: Wam, Rankoli, and

Tengia, while the Kisi in Sierra Leone have three: Tongi,

Kama, and Teng. In Guinea the Kisi people are divided

into two different areas, the circles of Macenta and

Kissidougou.

Besides the externally imposed political divisions,

there are the traditional ones of familial lineage or clan

(kaaleng LHH).

> Except for very large villages, the village is the
> locus of a clan or a major lineage. There are about
> seventeen clans dispersed over the entire Kisi area.
> Members of a clan share the same food and marry
> exogamously. Within a settlement, members of the
> same clan also share land which is held under
> communal tenure.
>
> (Massing 1982:1)

Massing goes on further to point out the close similarity

of the clan system to that of the Mandingo[2] (an ethnic

group adjacent to but linguistically, i.e., genetically,

unrelated to the Kisi except at a very distant level)

system of patronyms (see discussion of names in Chapter 4:

Word classes). The same system can also be found among

the Fulani and thus seems likely to be an areal

phenomenon.

---

[2] This language is also referred to as Maninka,
Malinke, Mandinka, Manding, and Mandekan.

1.2 Historical facts

Historical movements help to explain the current distribution of the Kisi people. Oral history has it among both the Kisi and Gola (a language related to and geographically near the Kisi area) that the original Kisis and Golas came from the Fouta Djallon in northern Guinea (D'Azevedo 1959, Schaeffner 1951)[3]. D'Azevedo speaks of an expansion of Mande-speaking peoples westward from the Mali area, forcing the Gola and Kisi into the uninhabited rain forest.

> The situation which seems to emerge from this material is one of a large number of indigenous forest tribes which have been pushed into close proximity along the coastal forests by the westward movement of larger tribes - mainly Mande-speaking -- from the interior savanna.
>
> (D'Azevedo 1959:50)

This scenario is also found in the brief history presented by Delafosse (1942:552). The time period of these movements is from the 1300s to the 1700s, the Kisi and the Gola probably reaching present-day Liberia at the beginning of the nineteenth century (Liebenow 1987:31-32).

Recent movements are more certain. The Kisi may have once been coastal people, emigrating from the area now occupied by speakers of the closely related Bullom

---

[3] Kup places the origin of the Kisi people in the Futa Toro region of Senegal (1961:130).

languages (see Figure 1). Other Atlantic[4] languages

coterminous with Kisi (Gola and Temne) show many fewer

lexical correspondences with Kisi than do the coastal

languages. The linguistic facts, then, support such a

sequence of movements for the Kisi. Fyfe (1972) and

Person (1961) state this movement took place in the

fifteenth century.

> According to A.P. Kup the Kissi, who had left
> the upper Niger together with the other West
> Atlantic ("Mel") language groups before 1600, at
> first only passed through the territory to
> establish themselves in the western part of
> Sierra Leone from where they may have migrated
> to the east about 1700, settling down at their
> present place in the south of the Makona River
> [sic].
>
> (Schulze 1973:47)

Massing sets the date of the crossing of the Makona River

(the border betwen Guinea and Liberia) around 1850

(Massing 1982:9, fn.1)   In sum, then, it seems likely that

there were two historical movements of the Kisi people,

the first part of a larger migration of peoples, the

dispersal from Senegal; and the second involving only the

Kisi, the move from the coast to the interior.

The map below represents the location of the Kisi

---

[4] Following Wilson (To appear), I will be using the
term "Atlantic" to refer to the group of languages that
has earlier, e.g., Greenberg 1966 and Houis 1958 been
known as "West Atlantic / Ouest Atlantique". The
"West / Ouest" part of the appellation seems superfluous
since there is no East Atlantic group of languages. From
this point on I will refer to the group Kisi belongs to
simply as "Atlantic".

people as well as other closely related languages within
the Southern Branch of Atlantic.
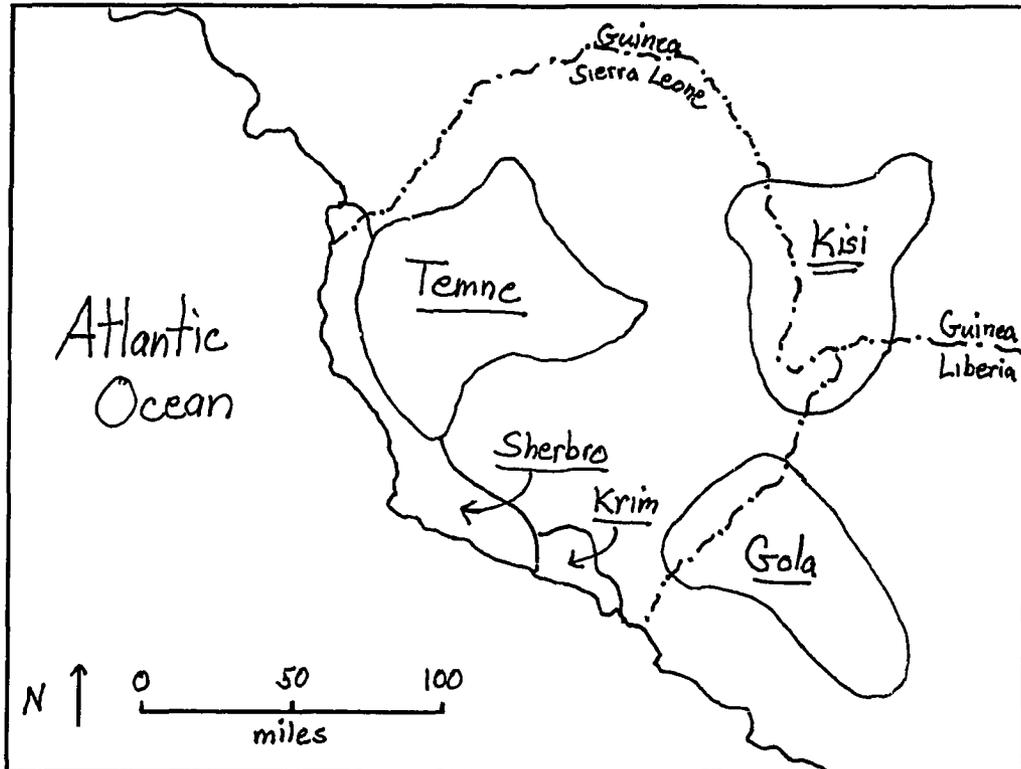
Figure 1: The geographical distribution of the Kisi
(Adapted from Dalby 1962, 1965)

Another important fact is that within such groups as
the Kisi or Gola, there has been little in the way of
group cohesiveness on any large scale(Bah 1983:120). The
largest social unit has commonly been the hamlet or clan
(U.S. Army 1961 and 1964). The Kisi people comprise a
highly decentralized ethnic group, with villages or minor
settlements functioning as the most important political,
social, and economic unit.

The Kisi have remained a truly segmentary society
despite a recent history which exposed them to more

organized and centralized political units such as
chiefdoms and large territorial states. The Kisi
habitat, the undulating terrain of the forest edge
which is dotted by numerous forested hillocks and
watered by many small streams and rivulets, favors
the dispersion of population units and social
fragmentation.

(Massing 1982:1)

Further division necessarily must have taken place
when the Kisi people were partitioned into three different
countries by (modern) political boundaries. Thus we have
a picture of "fragmentation" among the Kisi, parallel to
the fragmented linguistic situation in Sub-Saharan Africa
(Dalby 1977).

1.3 Genetic classification

The table below (Table 1) represents the position of
Kisi within Niger-Kordofanian-Congo. The outline below
follows Wilson (To appear), which integrates Sapir's
(1971) classification with that of Greenberg (1966).
These genetic groupings represent something of a
consensus, at least at the local level. The Mel
languages (I.B.2.b) represent a relatively cohesive unit,
as established by Dalby (1966), and his classification has
been incorporated into all later treatments (Mukarovsky
1976-77, Dalby 1977, Lacroix 1981) with relatively few
modifications. (See appendix A for a sketch of other
treatments.)

```
 I. Niger-Congo
    A. Mande
    B. (West) Atlantic
       1. Northern Branch: Fula, Wolof, Serer, etc.
       2. Southern Branch
          a. Sua
          b. Mel languages
             1) Landuma, Temne, Baga lgs (Banta, etc.)
             2)a) Bulom lgs (Mmani, Sherbro, Krim, Bom)
          b) KISI
          3) Gola
          c. Limba
    C. Gur / Voltaic
    D. Kwa5
    E. Benue-Congo
 II. Afro-asiatic
III. Khoisan, etc.
```

Table 1: The position of Kisi within Niger-Congo

Considerable controversy has engaged analysts at establishing higher levels of classification. The most radical proposal is that of Dalby (1977). He suggests that classification is possible only at low levels (as with Mel[6]). For classification at higher levels geographical criteria are invoked, although he captures higher relationships by his "Areas of Wider Affinity": "Northern" representing Afro-Asiatic, "Southern" encompassing Congo-Kordofanian.

---

[5]   In a recent formulation of the genetic relationship of Niger-Kordofanian-Congo languages, there has been considerable reshuffling of the languages within Kwa and Benue-Congo. As these revisions do not affect the relationship of Kisi within NKC, I have not included them here (see Demuth et al. 1986:454).

[6] The term "Mel" was actually invented by Dalby (1966), an "an artificial cover-name" which he now regrets having coined (1977:19, Footnote 11).

> There is an important reason for not establishing intermediate levels of relationship between the ultimate level, represented by areas of wider affinity, and the immediate level ... This is the fact that such intermediate levels of linguistic relationship have proved to be much less obvious and more difficult to define than either the ultimate or the immediate levels.
>
> (Dalby 1977:12)

Classification at intermediate levels is done using a "geographical tripartite division of the continent" (Dalby 1977:14). This approach of mixing genetic and geographical criteria is done in the hope of establishing a referential classification, i.e., one which all scholars will use. The same basic approach is followed by Lacroix (1981).

Mukarovsky differs from the traditionally accepted scheme of Greenberg (1966) by excluding Wolof, Serer, and Fula from Atlantic (his "Nigritic") and locating these three languages in a group of their own. In fact, Mukarovsky has done away completely with Atlantic as a language group (1977:4). We see, then, the controversy surrounding classification above the level of Mel, an issue that will not be confronted here[7].

---

[7] The focus of classification studies has been on divergence, much to the detriment of convergence, a common phenomenon throughout Africa (Heine 1976, Greenberg 1983). Both Dwyer (1975) and Dalby (1977) note this neglect and comment on the implications of convergence (and even "reconvergence) for historians. It is a phenomenon, they claim, that has received little attention (vs. divergence) because the assumption of common origins has biased analyses.

1.4 Status of the language

As is the case with other Southern Branch languages, the Kisi people are isolated from speakers of closely related languages (see Figure 1). The Kisi are surrounded by speakers of distantly related Mande languages, Mende, Loma, and Bandi, Kono, Koranko, and Maninka, sharing a boundary with only one other Southern Branch language, Temne. A high degree of multilingualism and the imposition of national languages (French in the Republic of Guinea, varieties of English in Sierra Leone and Liberia) result in Kisi being a language of relatively little importance above the local level.

Within this part of Guinea, typically Mende or Mandingo[8] will be used within the cities and Kisi in the countryside.

> The north of the Kisi country is characterized by a high degree of assimilation between the Kisi and the larger Malinke society and only in the south Kisi language and traditional religion still survive in their original forms. In that respect the Kisi colonies on Liberian territory seem to represent the most authentic form of traditional Kisi society even though a fair degree of assimilation between them and the Bande has already taken place[9].
> (Massing 1982:2-3)

---

[8] Both Mende and Mandingo are linguae francae on the rise (David Dwyer p.c.).

[9] My personal experience in Liberia does not support the observation that the Kisi are assimilating with the Bandi. Land wars were fought between the two as recently as forty years ago, and the Bandi are a frequent target of abuse and jokes.

In an informal survey I made concerning the extent to which Kisi was spoken in cities within the Kisi area based on informal interviews, I found a high degree of bilingualism in towns reported to be strictly Kisi speaking.

Other remarks underscore the undermining of Kisi's position as a socially and politically important language. Earthy stated that intermarriage with the Mende is causing a loss in the total number of Kisi speakers (1934:159). A missionary working among the Kisi in 1984 commented that the language would be extinct in fifty years (Norman Jaschen p.c.). This prediction is overly pessimistic given the number of speakers and the fact that "the rate of extinction of individual languages in Africa appears remarkably low" (Dalby 1977:9). The language, however, does seem to be losing ground in Guinea (U.S. Army 1961). It has been reported that there is "a tendency on the part of the Kissi [sic] to identify with their stronger, better organized Manding [= Mandingo, see Footnote 2, p. 2] neighbors" (Massing 1981, as reported in Liebenow 1987:37). Other languages closely related to Kisi seem to be undergoing the same fate: Sherbro (Rogers 1967:1); Krim (Pichl 1967:11); Bulom, Bom, and dialects of Temne (Dalby 1962:63-64).

That other languages seem to be encroaching on the domains of Kisi does not bode well for the future of the

language. A particularly unsuccessful attempt to expand the domains of Kisi (and other major languages in Guinea) was the <u>Alphabétisation</u> movement in Guinea[10]. This movement formed part of the Africanization of the curriculum and was based on the findings of UNESCO regarding instruction in one's mother tongue (Report of the UNESCO specialists, 1951. 1968). Until the death of Ahmed Sékou Touré and the recent coup in Guinea (1984), children were educated in one of the nation's seven major languages until the eighth grade. This arrangement has since been abandoned. Thus, another potential domain for the use of Kisi has been made unavailable.

1.5 <u>Dialects</u>

Very little is known about the different dialects of Kisi. It does seem clear, however, that the fragmentation mentioned above has probably contributed to a high degree of dialect diversity. Though no extensive dialect survey has been performed, investigators have reported several different dialects. Pichl reports three different dialects (p.c. as quoted in Sapir 1971:63), and Heydorn (1971:167) discusses a northern and a southern dialect. Samarin states,

> My informant spoke a Liberian dialect of Kisi. He indicated the existence of considerable local

---

[10] See Appendix C for an example of Kisi used in an introductory science and math textbook.

> differences in the language by saying that it was possible to tell where a man lived from the way he spoke. The dialect differences are apparently small between Liberia and Sierra Leone, but greater than between Liberia and French Guinea (present-day Republic of Guinea). Davis said that the speakers from French Guinea had a different "accent" and that the speech of a remote dialect was even difficult to understand.
>
> (Samarin 1950:89)

My own observations support the existence of different dialects. There are clear lexical differences, e.g., 'write' is <u>sEwaa LLH</u> in Guinea Kisi and <u>poonyaa LLLH</u> in Liberian Kisi; there are phonological differences as well e.g., the extent to which a dissimilation rule is operative (see Appendix B for other examples). There is also a great deal more mixture with Mandingo in the dialect of Kisi spoken in Guinea (see comments above regarding cultural assimilation).

There seems to be a boundary running roughly east-west, splitting Kisi into northern and southern dialects, roughly parallel to and slightly north of the division between Guinea and Liberia-Sierra Leone. Others have felt this division to be accurate (Wycliffe Bible Translators 1978:120)[11].

---

[11] The Wycliffe Bible Translators found the version of the Bible translated into Guinea Kisi to be inadequate for Kisi speakers of Liberia and Sierra Leone. For example, Liberians and Sierra Leoneans believed Jesus was a little girl on the basis of the Guinea Kisi word for 'child'. The ELWA broadcasting station in Monrovia, Liberia, uses two different broadcasters for their broadcasts, one from Liberia and the other from Guinea.

Larry Johnson (1984 p.c) performed a dialect survey on speakers from different chiefdoms in Sierra Leone, Liberia, and Guinea. This survey consisted of asking speakers to repeat short recorded narratives spoken by speakers from other areas. His most significant finding was that speakers from Kissidougou, the northern part of the Kisi area, were not understood by people from Sierra Leone and Liberia. In fact the speakers of the southern dialect refused to give any rendering of the Kissidougou narratives. Their reaction suggests that there is something more than purely linguistic ability being tested. One of my three assistants was from the Kissidougou area, and he experienced no problems of intelligibility with the Liberian Kisi. On the basis of the cultural assimilation among the northern Kisi (Massing 1982:1), it seems likely that the division into northern and southern dialects is a meaningful one.

1.6 Other work on Kisi

Mukarovsky (1948) represents the only full-fledged grammar of Kisi. The major weakness of this work is that it involved no original fieldwork; Mukarovsky based his analysis on the unpublished field notes of an American sociologist (Dora Earthy n.d.).

A number of articles have appeared whose primary area of interest has been the language's noun class system.

The best of these is Heydorn 1971, based on his own
fieldwork conducted in Liberia during the period 1930-
1939[12].

Current work on Kisi also suffers from limitations,
primarily because of the focus or purpose of the work on
the language. A graduate student (and native speaker of
Kisi) at the University of Sierra Leone (Bai-Sheka, p.c.)
plans to write his dissertation on Kisi[13], but other from

---

[12] Richard C. Heydorn appears in Graham Greene's
Journey without Maps as the mysterious German.

> He was young in spite of his beard; he had an
> aristocratic air in spite of his beachcomber's dress,
> and he was wiser than any of us. He was the only one
> who knew exactly what it was he wished to learn, who
> knew the exact extent of his ignorance. ... One day
> (it took a week to discover so much) he was going to
> write a thesis for [Dr. Westermann of] Berlin
> University. ... The thesis was an end, but the
> collection of material for the thesis had no end.
> The thesis was as evasive as the Castle in Kafka's
> religious parable [an appropriate analogy].
> (Graham Greene 1936:66-67)

During my own stay in Liberia (1983-84) I visited with
Father Pursell of the Holy Cross Mission at Bolahun.
Father Pursell had been at Bolahun when Heydorn was there.
Heydorn was living on a pittance that became increasingly
difficult to transmit from Germany, and thus had to depend
on the generosity of the Fathers of the Holy Cross
Mission. I, too, have benefitted from the hospitality of
Father Pursell and wish to acknowledge his assistance
here.
Father Pursell had many anecdotes to relate
concerning the extended stay of Heydorn, a first-class
linguist, as well as concerning the Greene party (Greene
was on a spying mission on behalf of the British
government, which was intersted in acquiring Liberian
territory), whom he called "babes in the woods".

[13] Bai-Sheka reported this to me at the Fourteenth
Annual African Linguistics Conference (1983). It is not
certain that he is continuing this work.

his and my own work, I know of no other linguistic research concentrating on Kisi.

The interests of other investigators have been of a proselytizing nature. A Church of England missionary has compiled a dictionary (Father Pursell p.c.), but the work was not made available to me[14].

The New Testament has been translated into (Northern) Kisi but has been deemed "not adequate for Liberia and Sierra Leone" (see Footnote 11, p. 12)[15] (Wycliffe Bible Translators 1978:120). Ongoing work in Liberia is encouraging as regards creating a viable written form of Kisi. It is being conducted by two Lutheran missionary families who have been actively (and successfully) promoting adult literacy in Kisi. Besides the expected project of translating the Bible, one of the two family heads, Norm Jaschen, has held literacy workshops, conducted increasingly by trained Kisis. The workshops concentrate on teaching Kisi adults to read and write their language. At the time of my research there (1983-84), there were weekly workshops going on in several areas. The literacy materials that have been developed to

---

[14] At the Holy Cross Mission at Bolahun, Father Pursell did make available to me a shoe-box-sized container of file slips, a preliminary to a dictionary. This is not the same work as the already compiled dictionary.

[15] The translation was done in Guinea. The fact that it was inappropriate for Liberia and Sierra Leone underscores the dialect differences between the two areas.

date include a series of workbooks and texts, as well as

several collections of folk tales and a calendar (see

Appendix D for some examples of texts). The other family

head, Larry Johnson, has written two explicitly

linguistic papers on the language (Johnson 1981, 1982).

1.7 Theoretical framework

The theoretical framework for this discussion aims at

neutrality and is couched in what is hoped approaches

"neutral" language. This approach is motivated by a

desire to make the presentation as intelligible as

possible. I have tried to use a traditional approach,

describing the language in a manner which would make the

contents easily understandable and accessible.

Joseph Greenberg and his co-workers adopted this

approach in their work on the Stanford Universals

Project. Greenberg advocates using a language of

observation, not an atheoretical language but one that is

intelligible to other linquists yet is tied to no one

theoretical school. It is the language linguists use to

describe generally agreed upon "facts" before departing

into theory-specific discussion.

> There is, in general, a common basis of observation
> statements on which linguists agree and which they
> seek to sccount for in various manners by higher-
> level theories.
>
> (Greenberg 1970:G9)

The approach I follow here is also reflected in the move away from abstract approaches and towards concrete or surface features, e.g., Hymes 1974:165. An important source for this move is the focus on language universals and typology, as exemplified in the work of the Stanford Universals Project and Comrie 1981.

The opposition between such an approach and a more formal one is seen as the opposition between "reification" and "expediency" by Bolinger. What Bolinger means here is that expository devices and formalisms can become the focus of inquiry rather than the means of discovery. Analysts forget that this scaffolding has been erected for observational purposes, in order to expedite one's data gathering (1950:117).

In line with this aim I have adopted generative formalisms in only a few instances, for example, to express the morphophonemics of the noun class system. I do so making no claim about the psychological reality of the formalisms; I do so because they are the most readily understandable and concise statement of the relationships among forms. As Bolinger comments above and Greenberg also notes (1970:G10), phonology is the part of language most susceptible to formalization.

Coupled with and perhaps identical with using the "language of observation" (Greenberg 1970:G14) is a reliance on a historical or processural approach. If

there is another bias in this work it is towards understanding synchronic variation in terms of diachronic processes.

I agree with Heine & Reh (1984) and Greenberg (1979) that we cannot regard language as a static entity. The fact that a language changes over time leaves its mark on the language, a mark accessible to the analyst in the phonological make-up of alternating forms. Where possible I present such alternating forms within an evolutionary framework, such as that exemplified in the writings of Greenberg (e.g., 1977, 1978) and Dwyer (1982, 1983).

1.8   Data base

This description is based on elicitation sessions and taped conversations with native speakers of Kisi in the United States and in Liberia. My collaborators in the United States were Neorlu Tumbeh, Fallah Tamba, and Maurice Keifa, the last of whom I worked with most extensively. In Liberia I received assistance from Paul Fayia Tengbeh, Moses D. Ndorbor, and Fallah Lambert, and especially from Tamba Mayson, one of the trainers for the Kisi Literacy Project. Appendix E contains a full description of the relevant linguistic characteristics of the individuals who assisted me.

Chapter 2: Overview of the language

This section provides a brief outline and some exemplification of several of the typologically interesting features of the Kisi language. (More detailed information appears in the relevant sections below.) For each feature presented, I note, when possible, whether the feature is an areal or a genetic one (or both).

The question of whether a feature is areal or genetic has vexed the classification of African languages. Contact phenomena have been important in determining the make-up of languages all over the continent; for example, Goodman (1971) reports that Mbugu (classified as a Cushitic language within Afro-Asiatic) has a grammar "borrowed" from neighboring Bantu languages (belonging to Benue-Congo of Niger-Congo). Greenberg (1983) attempts to evaluate the "areal-ness" of four linguistic phenomena claimed to be areal in earlier surveys. Two are phonological (labialvelars and labiodentals), one involves the use of a verb meaning something like `surpass, pass' in a comparative construction, and the fourth is semantic, the equivalence of `meat' and `animal' in many languages[1].

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[1] Of the four features three are attested in Kisi (see main text), the one exception being the presence of the labiodental flap. The equivalence of `meat' and `animal' (the fourth feature) does not partake of the same root as Niger-Congo in general.

Niger-Congo root: nam, nyam

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Greenberg concedes that the features do indeed appear

most prolifically in a contiguous area, but he warns that

an account of present-day distribution needs also to take

into account diffusion and contact phenomena (cf. Dwyer

1975). Thus we see that questions as to whether a feature

is areal or genetic require close consideration. The

most thoroughgoing discussion of typing African languages

and areal phenomena is contained in Heine (1976).

2.1 Phonological

Although there are no totally unexpected features in

the language's phonology, there are several that deserve

comment[2].

Swahili:	Ø-nyama	Ø-nyama	'meat (sg & pl)'
	m-nyama	wa-nyama	'animal (sg & pl)'
Kisi:	visi-ei	visi-ong	'meat (sg/pl)'
	visi-o	visi-a	'animal (sg/pl)'

[2] The reader is referred to "Abbreviations" (p. ix) for a full presentation of the notational conventions and abbreviations used in this work. The following symbols are used here:

Tone		Segments	
H = High	O =	[ɔ]	lower back rounded vowel
L = Low	E =	[ɛ]	lower front unrounded vowel
F = Fall	ng =	[ŋ]	velar nasal
R = Rise	ny =	[ɲ]	palatal nasal

2.1.1 Segmental

One notable feature of the (phonemic) segmental inventory is the presence of a doubly articulated stop, i.e. /kp/. Doubly articulated stops have been shown to be an areal phenomenon of precisely delimitable distribution, penetrating into contiguous portions of relatively unrelated language families (Welmers 1973:47-48, as quoted in Greenberg 1983:5; see also Greenberg's map p.21). Labialvelars are found in many unrelated languages, and they even appear in two West African pidgins spoken in the area, Liberian English (Singler 1981:23-24) and Krio (Fyle & Jones 1981). Yet the feature also shows evidence of being genetic and the details of its origin and distribution have yet to be worked out[3].

Another notable segmental feature is the set of pre-nasalized or nasal-compound stops: /mb nd ngg (mngkp)/; there are also two segments using the glottalic speech mechanism, the implosives /ɓ ɗ/. There are additional segmental sounds found only in ideophones, e.g., an initial [gb], contrastive nasalization.

2.1.2 Suprasegmental

---

[3] In fact, the picture Greenberg (1983) paints is quite complicated. It combines the positing of at least one labialvelar in Proto-Niger-Congo, loss of the sound in some of the daughter languages, and re-introduction of the sound in some of the languages. Thus we see that a feature may be areal, genetic, or both.

The most important feature of Kisi's suprasegmental inventory is the use of tone to signal lexical and grammatical differences. Tone can probably be reconstructed for Proto-Niger-Congo (Hombert 1984a), but tone also represents an areal phenomenon, distributed in much the same way as labialvelars. That it is areal can be seen by its presence in Krio (Fyle & Jones 1981) and possibly in Liberian English (Singler 1981b)[4].

The tonal system of Kisi has two level tones and two contour tones, which are transparently derived from level tones in some cases. Furthermore, the high tone is the "marked" tone, as is the case with the majority of tonal systems. As Maddieson points out, "Systems in which high tones are marked are more frequent than systems in which low tones are marked" (1978:342). An unusual, but not unknown, feature is the extra-high tone of Kisi. It is used sparingly in the language, functioning in only a few grammatical contexts.

Another suprasegmental feature found in Kisi is contrastive vowel length for all (non-diphthongized) vowels. Consonant gemination can be found in a few morphologically restricted environments. Both long vowels and geminate consonants are found elsewhere in Atlantic.

---

[4] An interesting development within Atlantic is that tone seems to be disappearing (Childs 1988a). This situation is parallel to the changeover from tone to accent in many Benue-Congo languages (Clements & Goldsmith 1985).

Contrastive vowel length is found throughout West Africa in different language groups, but gemination seems more severely restricted, found primarily in the Northern Branch languages of Atlantic, e.g., Biafada and Pajade (Wilson 1984).

2.1.3 Syllable structure

Except for gemination and homorganic nasal-stop sequences, Kisi allows no consonant clusters, although a glide (/y/[5] or /w/) may be found between onset and nucleus. Somewhat more unusually (for West Africa but not for the Atlantic Group), Kisi allows closed syllables; sonorants occur syllable finally.

2.1.4 Phonological rules

Kisi has no unusual phonological rules, either in the tonology or in the phonology proper. There are rules of nasal assimilation, consonantal epenthesis and deletion, as well as a rule of compensatory lengthening. An "unusual" rule of dissimilation[6] can be seen as the

---

[5] I am here following the American practice of representing the palatal glide with the symbol "y".

[6] In generative terms, the rule can be stated,

$$1 \rightarrow t \ / \ 1 + \underline{\quad} V$$

where "+" represents the morpheme boundary between noun stem and noun class suffix.

residue of a morphological process reinterpreted as a
phonological rule.

2.2 Morphological

Kisi has the two characteristic morphological systems
found throughout Niger-Congo: a noun class system and a
set of verb extensions. Both systems, though fully
productive, represent something less than the fullest
manifestation of either system in Niger-Congo. For
example, Fula has twenty-five noun classes (Arnott 1970)
and Swahili has sixteen (Hinnebusch & Mizra 1979); with
regard to verb extensions, Fula has nineteen (Arnott 1970)
and Swahili eleven (Moshi 1985). Kisi has only seven noun
classes and four verb extensions.

All nouns in Kisi are divided into seven mutually
exclusive classes, membership in which determines the
agreement marker affixed to agreeing elements, such as
adjectives and low numbers.

(1)   Noun classes in Kisi

le-class   ni+leng   'ear'
                  ear+NCM[7]
la-class   ni+lang   'ears'

 L   L   H   L   H
ni+le bEndu+leng   'big ear'
ear+NCP big+NCM
 L   L   H   L   H
ni+la bEndu+lang   'big ears'

---

[7] "NCM" is an abbreviation for "Noun Class Marker",
the suffixes affixed to nouns in citation form.

In Noun-Adj constructions the noun's suffix or noun class marker (NCM) is displaced by its corresponding pronoun (NCP). The noun class marker is suffixed to the adjective stem.

Verb extensions are affixes attached to the stem of verbs allowing the verbs to change meaning and the number of allowable arguments. Kisi has four such extensions: Causative, Middle, Benefactive, and Plural.

(2)   Verb extensions in Kisi

```
L    L L   L LLH
o dimi kisiei          'She speaks Kisi.'
Pro speak kisi
L   L L    H   L LLH
o dim-ul ya kisiei  'She speaks Kisi to me.'
she speak-Ben me Kisi
```

The second sentence illustrates the use of the Benefactive extension. The addition of the Benefactive morpheme, here represented by the replacement of i by ul at the end of the verb stem allows for the incorporation of an additional argument and a change or "extension" of the verb's meaning.

In terms of marking grammatical relations (Nichols 1986) Kisi tends to mark the dependent (rather than the head). In possessive constructions the possessor dependent noun is marked with the Noun Class Marker (NCM) of the possessed noun.

(3) Marking of the dependent in possessive
    constructions

```
LH   H  LL H
poombO saa-o          'Saa's son'
boy    Saa-NCM
 L H  L  LH
doma kumba-a          'Kumba's blouse'
```

Similarly modifying adjectives are marked with an element

determined by the noun class (gender) of the head.

(4) Marking of the dependent in adjectival
    constructions

```
L  L  H HH H
doma sakEi-o          'twisted shirt'
shirt twisted-NCM
 L    L LL H
nyE  sEnEi-o          'new thing'
```

Dependents are also marked in adpositional constructions.

This marking is evident when the objects are pronominal

for only pronouns have case-like marking. Other marking

of syntactic relations of the type Nichols discusses occur

only at the syntactic level where (dependent) relative and

subordinate clauses are marked.

(4) Marking of the dependent in relative clauses

```
L H  H  H   H  H   H   H  LH  H  HL  H
doma ya ke ndu wo, sangsi ndOO co hoo ni.
shirt I give him NCM, replacement its Cop this Foc
'The shirt I gave him, its replacement is this.'
H  H  H  HLL L  LL R     H  HH  L  H  L H     H
i kendi siauma diuwang, ma wa o yOmndo bolleng ndang
I pick  orange ripe     Pro were at tree top    NCM
'I picked the ripe oranges, which were at the top of
the tree.'
```

Subordinate clauses are generally marked with

subordinating conjunctions. Though not an extreme case of

this type, Kisi belongs unequivocally to the dependent-marking type of language.

2.3 Syntactic

As with most languages, difficulties can arise as to the constituency of word classes in the language. One of the most varied and slippery word classes in Kisi is that comprising ideophones. Ideophones are words of unusual phonological shape and limited morphology, which typically convey some vivid image. Ideophones are not particularly unusual insofar as African languages are concerned but are remarkable in many languages for their number and vitality. As much a part of the language as, say, nouns or verbs, ideophones nonetheless show a great deal of variation, phonologically, formally, and semantically, much more so than members of other word categories. They form a categor'' definable only by prototype and are crucially important in expressive discourse.

Other word categories are not so problematic. Kisi has nouns, verbs, and, somewhat unusually for this part of Africa, a full set of adjectives. There are also productive processes by which adjectives are related to verbs. There are adverbs of time and place, and ideophones are used to convey how something was done. Kisi also has both prepositions and postpositions, as illustrated above.

Compared to its morphology, the syntax of Kisi is rather impoverished. One identifiable construction is that used in WH questions. These questions are formed by fronting the argument that is questioned, replacing it with the appropriate question word, and inserting a question particle (*yE L*) after the finite verb element.

(5) WH questions

```
L   L H  L  H
o tosa wallo        'She did the work.'
she do work
HL L  L H   L
yEE o tosa yE       'What did she do?'
what she do Quest
```

Yes/no questions are intonationally differentiated from statements by a final rise.

Another productive and widely used construction is the focusing of a constituent, accomplished by preposing the item of focus and appending a focusing particle *ni H* to the end of the sentence.

(6) Focus with *ni H*

```
L L      H  LL LL  L H H
hOOngnda sOOsia koowang        'Leeches suck blood.'
leeches  suck    blood
L H H     LL      H LL LL   H
koowang hOOngnda sOOsia ni 'It's blood leeches suck.'
```

The item of focus *koowang LHH* 'blood' is preposed and *ni H*, the focus particle, appears finally.

Kisi can be evaluated within the typological framework developed by Comrie (1981). Comrie proposes two major types of languages, developing his feature clusters from Greenberg's (1966) findings.

(7) Feature clusters of Comrie (1981:91-92)

1. <u>VO cluster</u>: Verb-Object (VO), Prepositions (Pr), Noun-Genitive (NG), Noun Adjective (NA).
2. <u>OV cluster</u>: Object-Verb, Postpositions (Po), Genitive Noun, Adjective Noun.

Kisi possesses most of the features of the first cluster (VO). I discuss and exemplify each feature below.

<u>VO</u>: In Kisi, with some exceptions, the object follows the verb. For example, in the compound verb forms (Future, Present and Past Progressive) the order of constituents is S-Aux-O-V[8].

(8) Varied word order

<pre>
H   H H   H
i bEi ndu   'I peel (hurt) him.'

H   H   H L L
i co ndu bEi   'I will peel him.'
</pre>

<u>Pr/Po</u>: Kisi has both prepositions (Prep) and postpositions (Post), the latter position having more options. Only a few adpositions are allowed to appear before the object, and they are general rather than specific in meaning. After the object a fuller set of items is allowed, including a number of words transparently related to body parts.

---

[8] This seems to be an independent development in several languages of West Africa. Though it is not found in languages closely related to Kisi, it is found in Klao, a language belonging to the Kru Group (Singler 1986), and in many Kwa languages (Heine & Reh 1984).

(9) Adpositions in Kisi

```
         L    L    L L    L    H   LL    L     L   H
Post     bEndu kala kungo bOO bEnggu pE
         elder Emph grunt bush beneath (Post) if ...
```
'If an old man grunts loudly behind the shrubbery ...'

```
         L    H    H  LL H    H   L   L   L   LL   R
Prep     mEngndang o peelo nda ma co ma tiilang
         water at (Prep) waterside there it Cop it round
```
'The water there at the waterside is full.'

```
         L   LL  H    H  H   LHH   LH  LH
Both     o saanal la o pioo leeloo
         she swim me to (Prep) river across (Post)
```
'She swam across the river for me.'

As the third example shows, prepositions and postpositions

can be used together as circumpositions.

NG: Noun-Genitive is the pattern common to all

genitive-like constructions.

(10) Noun-genitive pattern

```
         L    L    L   H
ni-le ni-leng                        'my ear'
ear-NCP my-NCM
         L      L   LL  H
mEng-ma saa-ang                      'Saa's water'
water-NCP Saa-NCM
```

NA: Similarly, adjectives follow the VO cluster

pattern and come after the nouns they modify.

(11) Noun-adjective constructions

```
         L      L   H   L  H
mEng-ma bEndu-ang
water-NCP big-NCM                    'big water'
         L      L   L   L  H
mEng-ma pOmbO-ang
water-NCP small-NCM                  'small water'
```

Besides the primary cluster of characteristics listed

above, Comrie gives a number of secondary characteristics

associated with each cluster. Kisi again follows the VO pattern.

<u>Post-nominal relative constructions:</u> Kisi relative clauses follow the nouns to which they refer.

(12) Relative clauses

<pre>
L   L LL H   L H   H LH   H
</pre>
ba-ng o diu-ung tosa mbo naa ni
bitterball-NCP she eat-NCM make Conj-she sick Focus
'The bitterball she ate made her sick.'

<pre>
L   L L L H   L H   H LH   H
</pre>
mEng-ma o kol-ang tosa mbo naa ni
'The water she drank made her sick.'

Although the language suffixes its noun class markers in most cases, there are remnants of an earlier prefixing system. The changeover to suffixation appears to be relatively recent, since none of the languages closely related to Kisi has yet developed a comparable suffixing system[9].

(13) Affixation of noun class markers

<pre>
                 L   H   L   H
Suffixed: yum + o   --> yumndo   'tree'
                tree NCP
                L L L   H   L L L H
                muEi + ang --> muEiyang   'liquor'

                L   L L L H
Prefixed: ma-muEi le   'not liquor'
                NCP-liquor Neg
                L   L
                la-kO   'going'
                NCP-go
</pre>

---

[9] This situation is discussed within an evolutionary framework in Childs (1983).

The dominant pattern is for noun class markers to be
suffixed to stems, as in the first set of examples.

Auxiliaries before the main verb: Kisi always places
its auxiliaries before the main verb.

(14) Syntax of auxiliaries: Aux (Object) Verb

```
H   H   L  L
i  co  lakO
I Aux go                   'I am going.'
L   H   H   LL  L
o  wa  ndu  bEiyo
she Aux him peeling        'She was beating him.'
```

Standard after comparative: Kisi follows the pattern
associated with VO languages in locating the standard
after the comparative.

(15) Comparative construction

```
L   L   LLL   L   H      LL  H
bEndu hiou bE-num kpaiya
brother pass brother-your strength[10]
'Brother is stronger than your brother.'
L   LLL   H   L   LH
o  hiou  ya  nangOO
She pass me goodness
'She's more handsome than I.'
```

In sum, then, Kisi conforms to both the primary and
secondary characteristics associated with VO languages as
postulated by Comrie. The one exception to the pattern is
with respect to suffixing of its noun class markers.

---

[10] Greenberg (1983) has noted that a verb meaning
something like 'pass, surpass, overcome' is used
throughout Niger-Congo in comparative constructions
(mentioned above). It is another of the "areal" features
that seem to be both areal and genetic in distribution.
See Singler (1981:10) for the use of such a verb form in
Liberian English and a discussion of the possible
multiplicity of its sources.

According to Comrie's patterns, the markers should be prefixed. This "aberration" is probably due to Kisi's relatively recent change from prefixing to suffixing its noun class markers.

A more local treatment, a typology devoted to Africa, is Heine 1976, which proposes four different types of languages based on a "dominant/recessive" dichotomy. This dichotomy is based on criteria commonly used for the unmarked/marked distinction, e.g., statistical predominance and distributional facts[11]. The languages of Atlantic[12] belong to his Type A group, a group which is characterized by the presence of exclusively dominant features, the most important of which are given below[13].

1. the subject precedes the verb,
2. the object follows the verb,
3. the adverbial phrase follows the object,
4. the adposition (preposition) precedes the noun,
5. the genitive follows its head noun,
6. nominal qualifiers like adjective, numeral, possessive, demonstrative, or relative clause follow the noun,
7. the adverb follows the verb and the adjective,

---

[11] This typology is a more highly articulated and motivated discussion than that of Greenberg 1963. Heine presents four different major types versus Greenberg's three, and three of his four types can be derived from the first (Type A) by applying a rule of [+dominant] -> [-dominant] in selected syntactic environments.

[12] Heine does not discuss Kisi but has considered languages from both Northern Branch (Wolof, Fula, Serer, Diola, Balanta, Mankany) and languages from Southern Branch (Gola, Sherbro, Temne).

[13] Since objects always follow subjects in the languages he considers, it is not listed as a feature.

8. the subject pronoun precedes the tense/aspect
   markers, negative particle, the verb, and the object
   pronoun,
9. tense/aspect markers precede the verb,
10. the object pronoun follows the verb.

(Heine 1976:40)

Because so many languages show deviations from this
pattern (and Kisi is no exception), Heine finds it easier
to specify Type A's defining characteristics negatively:

a. the verb does not precede the subject
b. the adverbial phrase does not precede the verb
c. Gen-Nom and N-Post orders do not both occur

(Heine 1976:40)

Kisi shows no deviations from the negative specifications
if one considers only the "dominant" structures, as Heine
says one should. The language does deviate from several
of the positive specifications, ones already mentioned
above. Objects can precede the verb in certain
environments, and Kisi allows both prepositions and
postpositions. Otherwise the language conforms to the
pattern of Type A languages.

What is interesting to speculate about is the source
of the deviations from the pattern. Heine suggests that
two forces might be at work disturbing the regularity of
the pattern, and both are related to the contact phenomena
discussed above. The first is what Heine calls an "areal
nucleus". A Mande center located just to the north of the
Kisi area (Map 2 in Heine) emanates recessive features of
the type not found in Type A languages.

The second relevant aspect is Kisi's proximity to the Senegal-Niger area of convergence. This feature has been remarked upon above with reference to phonological features and represents a uniformity of syntactic features across genetic boundaries. Because the Kisi area is surrounded by non-Atlantic languages, it seems possible that some convergence could have taken place.

In summary, the features of Kisi are those which would be expected on the basis of its genetic affiliation and location. Word order, morphology, and phonology conform to the patterns of Atlantic and Niger-Congo in general, but areal features and influences also play a part in determining the language's grammatical make-up.

Chapter 3: Phonology

3.1 Consonants

3.1.1 Consonantal inventory

The consonantal inventory of Kisi contains a rich series of stops. There are nasal stops, nasal compound stops, implosives, and voiceless stops. There is also a series of voiceless fricatives and an affricate, as well as a single liquid /l/ and two glides /y/ and /w/. These phonemes are concentrated at three places of articulation: the lips, the alveolar ridge, the velum, and simultaneously at the lips and velum (labialvelars).

(1) Consonantal inventory

	Lab	Alv	Pal	Vel	Lab-Vel	Glot
Nasals	m	n	ny	ng		
Nasal-cpd stops	mb	nd	(nyj)	ngg	ng͡mgb	
Implosive stops	ɓ	ɗ			(ɠɓ)	
Voiceless stops	p	t		k	k͡p	
Affricate			c			
Fricatives	f	s				h
Liquids		l				
Glides			y		w	

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3.1.2 <u>Consonantal allophones and distribution</u>

Allophony in Kisi is due to processes of assimilation, both anticipatory and perseveratory. Palatal and labialvelar glides are anticipated by preceding consonants which share features of palatality and labiality. On the other hand, there are perseveratory processes; all vowels are nasalized after nasals and voicing also is perseveratory.

3.1.2.1 <u>Nasals</u>

/n/ The alveolar nasal is somewhat restricted in its distribution. Unlike the other sonorants, /m, ng, l/, the alveolar nasal is not found (syllable-)finally. Because of alternations elsewhere in the language, it seems likely that there has been a neutralization of the contrast between the alveolar and velar nasal in this position (discussed below), resulting in only the velar nasal appearing finally.

(2) Distribution of /n/

H H		
naa		'we, us'
L L H	L L H	
nauwo	*nauwa*	'cow/s'
H L		
nanung		'here'
L L L H		
taanio		'to stand bond'

The alveolar nasal is slightly palatalized before [i] and labialized before [u].

(3)   Allophones of /n/

    H H
[n^Y]iOulullo   'to step on for'
    L L H
[n^W]uaaa   'to look at or stare'

/m/   The bilabial nasal, besides appearing initially, is allowed to close syllables, although it does not do so as commonly as the velar nasal.

(4)   Distribution of /m/

LL H   LL HH
maalong   maalei   'uncooked rice'
L LH
malaa   'to help'
L LH
komOO   'to bear'
H HH   H HHH
mOmOO   mOmuEi   'cooked rice'
H
num   'you'
L   H
tOmndo[1]   'monkey'

/ny/ The palatal nasal appears only initially and intervocalically and appears less frequently than the other nasals.

(5) Distribution of /ny/

L H
nyOO   'thing'
L   H
nyumndang   'darkness'
L HH
tonyaa   'truth'

---

[1] I give here the full form of the word for 'monkey', i.e., its stem with its noun class marker. Its stem is simply tOm L.

L   L H
fànyàa   'to move'

In no instances was /ny/ followed by a glide. This fact and its limited distribution suggest that /ny/ may once have been an allophonic variant of a sequence of, for example, /n/ and /y/, since phonemicized as the palatal glide, especially since /n/ has a palatalized allophone.

/ng/ The velar nasal is quite free in its distribution but is found in initial position less commonly than the other nasals.

(6) Distribution of the velar nasal

H H H
nguEEnu   'five'
H H   H H   H
ngOOngngOOngndo   'bull frog'
L L H
tungOO   'to deny (someone something)'
L L L H
tuingio   'to remove from the fire'
H
hung   'Come!'
L H   L H
nileng nilang   'ear/s'

It is quite common at the end of words and does not contrast with /n/ in this position, as mentioned above. In fact, [n] must be regarded as an allophone of /ng/ in some cases.

(7) The [n] allophone of /ng/

F   F
[sun] / [sung][2]   'later'
L R H   L R H
[tunOngndo] / [tungOngndo]   'to deprive oneself'

---

[2] The symbol "/" should be read as 'freely alternates with'.

Another allophone of the velar nasal is a labialized

variant, appearing before the high back rounded vowel /u/.

There is also a palatalized variant, appearing before /i/.

(8)   The [ng^W] and [ng^Y] allophones of /ng/

LL H
[ng^W]ueiyo   'crab'
LH H
[ng^W]uEEnu   'five'
H H
[ng^Y]iOOng   'two (a class)'

3.1.2.2 Nasal compound stops

All of the nasal compound stops in Kisi consist of a

homorganic series of sounds beginning as a nasal stop and

ending as a voiced (non-nasal) stop. There are five

phonemes in the series, the bilabial and the alveolar

being the most common of the four. The general

distributional pattern is that the nasal compound stops

are found medially rather than initially.

/mb/ The bilabial nasal compound stop appears

initially and medially, more rarely initially.

(9) Distribution of /mb/

L HL H   L HL H
mbiliiyo mbiliilang   'drum/s'[3]
L
mbo   'and he/she/it'
L LH   L L H
lEmbOO lEmbElang   'trousers (sg/pl)'
L LH
tambei   'to be rotten'

---

[3]   This word is also found in Mende (Dwyer p.c.)
and thus may represent a borrowing.

/nd/ Similarly to /mb/, the alveolar nasal compound stop is found primarily in medial position, although some words begin with the sound. In fact, a number of pronouns (and the word for 'mother') begin with /nd/, and thus /nd/ is heard more frequently than /mb/ in initial position.

(10) Distribution of /nd/

H *nde*	'Mother'
H *ndu*	'him, her, it'
H LL H H LL H *ndeweiyo ndeweilang*	'measuring cup/s'
LL LH *piondOO*	'to buy'
L HH *lindEi-*	'dirty'

/ngg/ The velar nasal compound stop, following the pattern of the other members of this series, is rare in initial position and common medially.

(11) Distribution of /ngg/

L H *nggaa*	'three'
HH HH HH HH *nggeemaa nggeemaa*	'scorpion/s'
L H LH L HH *langgunOO langgua*	'adult male/s'
LL LH LL H *tEEnggei tEEggong*	'hole/s'

/ngmgb/ Although there are only a few words which begin with the labialvelar nasal compound stop, it is fairly well established medially.

(12) Distribution of /ngmgb/

L HH *ngmgbondoo*	'edible green grasshopper'
R H *ngmgbOngndo*	'green stinging caterpillar'

```
  L    H L    H
sOngmgbOOngndo 'stinginess'
  L      H H
sungmgbuleng   'post'
```

3.1.2.3 Implosives

All members of the voiced series of stops in Kisi are imploded. These stops are produced only at the lips and alveolar ridge.

In regard to the nasal compound stops and the voiced (implosive) stops, distributional facts hint that the system formed by these stops may once have been simpler. Nasal compound stops are rare initially and voiced stops are even rarer medially. The nasal compound stops may have originally been medial allophones of the voiced stops. The source of the nasal component remains unexplained but may have come from a preceding syllable-final nasal. But because the nasal compound stops have established themselves in word-initial position and contrast with the implosives there, we must posit the two series.

/b/ The bilabial implosive is strongly imploded and appears almost exclusively in initial position.

(13) The distribution of /b/

```
 L H    L  H
baa  balang            'hand/s'
 L   L H
bongaa                 'to knock or rap on'
```

```
H LH    H LH
buboo  bubua              `pig/s'
H H
cobe                      `a little, a short time'
```

Other words featuring /b/ medially are, for the most part,

ideophones[4] or words involving reduplication, as in `pig',

the stem of which is *bubu HL*.

/d/ The alveolar implosive has no remarkable

allophones and is found only in initial position, with

only ideophones and reduplicated stems violating this

generalization.

(14) The distribution of /d/

```
L LH
deloo                          `to fall'
L  LH    L  R
dunyEi  dunyOng                `feast/s'
L H L  LH    L H L  LH
kolOdundoo  kolOdundua    `centipede/s'[5]
H      H
dong-dong            (ideophone) `quietly, softly'
H HH   H H H
dadaa  dadalang              `chin/s'
```

The ideophone `quietly, softly' clearly involves

reduplication because there is also a form *dong H* with

essentially the same meaning. It is possible that the

---

[4] Because of their unusual phonology, ideophones are discussed separately, in Section 4.7 below.

[5] It is likely this word is a compound. Although no morpheme *kolO LL* exists, another animal name begins with the same partial, i.e., *kolOkpokpoo LLLLH* `a species of bird'. Furthermore, the rest of the word for `centipede' follows the reduplication pattern common to animal names in the language, e.g., the word for `pig' in the preceding example, *buboo HLH*. What is noteworthy about the word for `centipede' is that the rest of the stem *dundu LL* illustrates the general phontactic pattern discussed above, i.e., voiced stops initially, nasalized stops medially.

word for `chin' involves the same process. Once again it
seems clear that /d/, like /b/ is well established
initially, but is rather more uncommon medially.

There are a few instances of a palatalized allophone
of /d/ before the palatal glide.

(15) The palatalized allophone of /d/

     L H
[d^Y]yallong   `body'
    L H
[d^Y]yOmndo   `fool'

In rapid speech a process that is usually found only as a
morphophonemic rule works at full word boundaries. The
voiced alveolar stop becomes the alveolar nasal compound
stop after the velar nasal.

(16) Rapid speech changing /d/ to [nd]

HL L
daama   `only, sole' (citation form)

L H H   H L R   L H
mEE kong [nd]ama yE cyE ni
then that only Prt-I see Foc
`That's the only one I can see.'

Another effect of the rapid speech is the way in which yE
R represents yE L, a conjunction particle, and i H `I'.

(/gb/) The voiced labialvelar stop is not well
enough established to be regarded as a separate phoneme in
the language. It occurs initially in only a few words,
and medial [gb] can be regarded as an allophone of the
voiceless labialvelar stop /kp/, which is predictably
voiced intervocal ically.

(17) The distribution of (/gb/)

H H H H
gbolomomo   'a way of braiding hair'
H+ H+   H+   H+[6]
gbenggeng-gbenggbeng   'sound of a bell'
H H
gbolung   'sound of a weaver's shuttle'

As is suggested by the examples, initial [gb] occurs
primarily with ideophones and ideophone-like words. Other
examples of medial /gb/ can be interpreted as the latter
half of a labialvelar nasal compound stop.

3.1.2.4 Voiceless stops

Voiceless stops are aspirated but not nearly so
heavily as English stops in initial position before
stressed vowels. Voiceless stops, unlike voiced stops,
occur not uncommonly in medial position. The voiceless
stops have palatalized and labialized allophones.

/p/ The voiceless bilabial stop is slightly
aspirated and is found primarily in initial position.

(18) The distributional pattern of /p/

L H   LL H
paa paalang   'bone/s'
H
pung   'early'
L LH
tapio   'the month around September'
L LH   L LH
copio copia   'squirrel/s'

---

[6] The symbol "H+" represents the extra-high tone in
Kisi. It is used in the grammar, as well as in the
ideophonic subsection of the language. See discussion of
tonology below.

The voiceless bilabial stop has a a palatalized allophone before the palatal glide.

(19) The palatalized allophone of /p/

[p^y]yaa (H L) 'describes the sound of cutting through the water with great speed'

[p^y]yoo (L H) 'to be full, lumpy, or swollen'

/t/ Like the bilabial voiceless stop, the voiceless alveolar stop is slightly aspirated. It is found most often in word-initial position but can be found medially as well.

(20) The distributional pattern of /t/

too (L L) 'low, down, below'

tunggotunggoo (H H H H H) 'grasshopper'

botaa botalang (L HH L H H) 'fist/s'

dataa (L L H) 'to criticize'

This stop has a palatalized allophone before high front vowels and the two glides.

(21) The palatalized and labialized allophones of /t/

[t^y]indaa (L L H) 'to hobble'

[t^y]yondoo (L L H) 'to be awake'

[t^w]weiyoo (L L L H) 'to hear'

Synchronic and diachronic alternations suggest that some instances of /c/ may have once been instances of /t/. Heydorn was the first to comment on the alternation

between the affricate (which he represented with the symbol *ty*[7]), and the (palatalized) velar stop.

> In some instances <u>ty</u> and <u>k</u> seem to be inter-
> changeable, thus we find, e.g., <u>tyimbu</u> or <u>kimbu</u> 'to
> flee'. In NKi. [Northern Kisi] <u>ty</u> is frequently
> displaced by <u>ky</u>; there we hear, e.g., <u>kyuing</u>- instead
> of <u>tyuing</u>- 'goat'.

<div align="right">(Heydorn 1970:167)</div>

In my own data (furnished almost exclusively by speakers of Southern Kisi, thus, I recorded *cuing LLL* 'goat' rather than the Northern Kisi variant), the following variants were recorded.

(22) Alternations of /c/ with /k/.

L LH   L LH
cindaa / kindaa   'to survive'

F   H
kingndeng   'arrow'
L   H H
cingOleng   '(drilling) bit'

H   H H H H
congguEiyo   'enamel bucket'
L   L L H H
kOngguEiyo   'galvanized bucket'

The first pair represents a synchronic alternation; the second and third may represent alternations that have been lexicalized with subsequent semantic divergence.

It also seems likely that what were once instances of the alveolar stop before palatal vowels have been reinterpreted as palatal affricates. In my own data I

---

[7] Despite using this symbol, Heydorn explains that both the voiced ("dy") and voiceless ("ty") varieties are pronounced as the corresponding affricates: *j [dZ]* and *c [tS]*

found a few cases where such a reinterpretation seemed possible.

(23) Alternations of c̲ with t̲

```
L   LH
tendei              'forehead'

cindei              'forehead' (Heydorn 1970)

L    H H
tEnggEleng          'dry elephant grass'
L    L H
cEnggileng          'elephant grass'
```

Since Heydorn records no instances of the t̲/c̲ (or t̲/t̲y̲) alternation, there is the suggestion that the palatalization differences between the Northern and Southern dialects may be becoming more pronounced. That is, there is increasingly more palatalization and reanalysis in the Southern dialect. In NK there is a palatalized velar; in SK this has become an alveopalatal affricate. Furthermore, in SK the alveolar stop is also palatalized before palatal segments and has occasionally been reinterpreted as the same affricate.

With some speakers it is possible to hear a geminate alveolar stop [tt], comparable to the geminate l̲l̲ discussed below, with some of the nouns belonging to the l̲a̲ class and with a very few belonging to the l̲e̲ class.

(24) The geminate [tt]

```
L  H   L  H
tallo  taltang         'bridge'
L  H       L  H                LL H        L H
taltang -> tattang        (-> taatang -> tatang)
```

```
L  H  H      L  H  H
dumbulteng  dumbultang    `citrus fruit'
L  H  H        L  H  H
dumbulteng -> dumbutteng
```

The sequence can optionally be reduced as shown for `bridge'.

/k/ The velar stop is found initially (more than any other phoneme per number of dictionary entries) and infrequently medially.

(25) The distributional pattern of /k/

```
L L L LH H    L L L LH H
kamatikEiye  kamatikEiyOng    `leafy vegetable/s'
L L L LH     L L L R
kevikevei    kevikevong       `palm/s'
LL R     H
diikOngndo                    `to be submissive'
L H H
dukulu                        `compact, stout'
```

There are some synchronic dialectal alternations between a palatalized version of /k/ and the palatal affricate, given below in the discussion of the affricate. The velar stop is palatalized before the high front vowel /i/ and more so before the palatal glide /y/.

(26) Palatalization of /k/

```
L  LLH
[kY]isiei      `the Kisi language'
LL H
[kY]iiyo       `palm wine dregs'
L  LH
[kY]iondOO     `to be ripe'
```

The velar stop is labialized before the labialvelar glide and the high back rounded vowel.

(27) Labialization of /k/

L H
[kʷ]wiyo   'to be plentiful'
LH H
[kʷ]uuwe   'crumb'

/kp/ Because the voiceless labialvelar stop is not aspirated, unlike the other voiceless stops, it is possible (for English speakers) to mistake it for the voiced labialvelar stop /gb/. The labialvelar stcp is found both initially and medially.

(28) The distribution of /kp/

LL   LH
kpeendaa   'to be strict; to braid rope'
H H H   H H
kpuEi *kpOOng*   'rattle shell/s'
L LH   L   L H
dokpoo *dokpolang*   'rice flour/pl'
L LH   L   L H
takpaa *takpalang*   'chest/s'

The voiceless labialvelar stop has a voiced allophone in medial positions after a nasal and occasionally between vowels.

(29) The voiced allophone [gb] of /kp/

L   LH   L   L H
kpEng[gb]OO *kpEng[gb]Elang*   'type of drum/s'
L   LH
fu[gb]aa   'to beat'

3.1.2.5 Affricate

/c/ The palatal affricate has a number of different allophones ranging from the alveopalatal to a nearly velar position. As mentioned above, there are synchronic and

diachronic alternations between the palatal affricate and both the velar and the alveolar stops.

The distributional pattern of the affricate is essentially that of the voiceless stops (and the fricatives). It is found in initial position and occasionally within words.

(30) The distributional pattern of /c/

L LH *cuwOO*	'to finish'
LH H LH H *ciiyo ciiya*	'buffalo/es'
L HH LH L HH LH *cokaacoo cokaacua*	'frog/s'[8]
H L *laci*	'in front of'
L LH *facio*	'bucket/s[9]'

The voiced counterpart of /c/, [j], is found initially only in borrowings (see preceding footnote) and medially

---

[8] In Thomas (1916) the word for 'frog' is given as *tokaco* (no tone markings), and thus represents another example of an alternation between the alveolar stop and the palatal affricate. What is curious about this example is that it does not seem to be conditioned by a high front vowel. Thomas does not say where his informant is from. The title of his book, <u>Specimens of Languages from Sierra Leone</u> suggests that his speakers were from Sierra Leone, where the southern dialect is spoken. This conflicts with the linguistic evidence, for in many cases words which are pronounced with initial *c* in my notes are recorded with *k* in his, as with the word for 'frog' above. It therefore seems likely that his informant spoke the northern dialect.

[9] This is a borrowed word, coming from Mende *faji* 'bucket'. Note how *j* is devoiced in Kisi (see discussion of nativization patterns below). One informant, who also spoke Mende, gave the Kisi word with the segment voiced *[fajio LLH]*.

in at least one word after the palatal nasal (see

discussion of the allophones of /y/ below).

(31) [j] in borrowings

H H HH H   H H HH H
jEnEvEiyo jEnEvEiya   'lightning bug, spark'
                              < Eng. 'generator'
L H   LH H   L H   LH H
jeminggEiyo jeminggEiye   'a kind of banana'
                              < English 'Jamaica'[10]

3.1.2.6 Fricatives

/f/ The labiodental fricative is pronounced with a

great deal of frication, considerably more than the

English /f/. It is found both initially and medially.

(32) The distribution of /f/

L   LH   L   L H
fungmgboo fungmgbulang 'welt/s'
L L   L H   H
felengfelengndo   'whirlwind, dizziness'
L LH
tofaa   'to look at'
L LLH   L LH
tafiei tafiong   'skin disease/s'

/s/ The alveolar fricative is found both initially

and medially.

(33) The distribution of /s/

H H   H   H H   H
soongndo soongndang 'hole, well'
L LL H   L LL H
siEiye siEiyong   'beard'

---

[10] David Dwyer (p.c.) suggests that this borrowing
may have been mediated by Mende jeminggggai LHLH 'a kind of
banana'.

```
L LH
```
tosaa   'to do or make'
```
H L
```
kpOsu   'sound of breaking'

The alveolar fricative /s/ has a strongly palatalized

allophone before the palatal glide.

(34)   Palatalization of /s/

```
    LH
```
[sʸ]yaa   'to rain'
```
L HH H
```
[sʸy]ElEiyo   'laziness'

/h/ The "glottal" fricative appears only in initial

position with one exception given below.

(35) Distribution of /h/

```
H L
```
haa   'these, a̲ class demonstrative'
```
L  H   L  H
```
hollo holle   'mushroom'
```
H L LH    H LH
```
kpehenOO kpehia   'child born right after twins'

3.1.2.7 Liquid

/l/ The lateral liquid has a central allophone [r]

appearing in initial position before [u] and occasionally

medially.

(36) The [r] allophone of /l/

```
  LL    H    LL    H
```
[r]uangnde [r]uangndong   'holy place, hill'
```
      LLL
```
ruOi / luEi   'enter' (Heydorn 1970 / my data)
```
LL  H H    L  H H
```
luankoli / rankoli   'clan name'
```
L H H    L H H
```
kamara / kamala   'clan name'

Heydorn (1970) states that the [r] allophone is uncommon in Southern Kisi, and that was indeed my experience. In Northcote's (1916) examples, which seem to have been provided by speakers of Northern Kisi [r] was recorded where I found [l]. In my data the allophone appeared initially with only a few words, all of which are given above.

The apparently free variation between [r] and [l] in this position is found also in the Liberian English used by Kisi speakers. In Liberian English there is a contrast between /l/ and /r/, and the lack of a contrast between these two phonemes is highly stigmatized (Singler 1981). The most notorious pair in this regard consists of the pair 'load' and 'road', pronounced identically by many Kisi speakers.

Along with the nasals /ng/ and /m/, /l/ is the only consonant allowed to close syllables.

(37) The distribution of /l/

LL LH *liilaa*	'to accompany'
H H *loo*	'market'
L *lol*	'sleep'
L *fal*	'elder'

The liquid is often reduced to ∅ in intervocalic position. Before consonants <u>l</u> also disappears.

(38) The ∅ allomorph of /l/

L H L H
tallo *taltang*   'bridge/s'
L H   LL H
taltang   ->   *taatang*

See the discussion of contour tones in 3.3.1 for the

importance of the disappearance of /l/ intervocallically

for the rise of contour tones.

   3.1.2.8 <u>Glides</u>

 /w/ The labialvelar glide has a voiced labiodental

allophone [v] before the high front vowels /i/ and /e/.[11]

 (39) The [v] allophone of /w/

L LH   L H
[v]isiong 'meat'   *[w]allo* 'work'
L LH   L L H
[v]elaa 'to be dry' *[w]Omullo* 'spin'

Occasionally this allophone will appear <u>after</u> a high front

vowel.

 (40) Variable [v] after a high front vowel

H H L   L H L
i [va] long   *o [wa] long*
Pro was there   Pro was there
'I was there.'   'He was there.'

The labialvelar glide is found initially, as shown in the

examples above, as well as medially.

 (41) Medial appearance of /w/

LL LH
kuuwaa   'to stutter'
H F H H F H
tiwOllo *tiwOlla* 'fox/es'

---

[11] Inexplicably Heydorn (1970:168) claims that /wii/
is always realized as *[wii]*.

The glide also appears after nasal (stops), voiced and voiceless stops, the affricate /c/ and /s/. It does not appear after /f/.

(42) The labialvelar glide after consonants

L H
swei   'finger'
L
twal   'descend (Hab Affirm)'
H H H
bwEiyo 'servant'
L L H
mwEiyang 'liquor (generic)'

Another restriction, as is suggested by the examples, is that the labialvelar glide appears before only front vowels (including /a/).

/y/ The palatal glide appears both initially and intervocalically.

(43) Distribution of /y/

L LH L L H
yalaa yalalang 'fish net'
L LH
yifaa   'to partially close; to hide'
L LH
yiyaa   'to lodge'
H H L LL
kOOyOlOO   'listless'

More frequently than the labialvelar glide, /y/ appears after consonants. It is found after nasals, both voiced stops, all voiceless stops except /kp/, the affricate /c/, and the fricative /s/.

(44) The palatal glide after consonants

L LH
kyolEi- 'leprous'
LL LH
dyamboo 'to lecture'

HH H H
syOmbulang   'shame'
LL H
nyOuwo[12]   'to step on'

In the same way the labialvelar glide is found only before

front vowels and /a/, the palatal glide is found only

before the back vowels and /a/[13].

In one word the voiced palatal affricate [j] can be

analyzed as an allophone of /y/.

(45)   [j] as an allophone of /y/

H   HH   H   H H
kpang[nyj]aa   *kpang[nyj]alang*   'potato greens'

The sequence [nyj] also appears at morpheme boundaries as

a variant of /y/ after nasals (see discussion of

phonological rules below). It is on the basis of that

evidence that we can analyze the segment as an allophone

of /y/ rather than a voiced version of the voiceless

palatal affricate[14].

---

[12] This example illustrates part of the reason why
the Kisi Literacy Committee has adopted a practice of
representing pre-vocalic glides with the symbols "i" and
"u". It obviates the possibility of confusing the palatal
glide "ny" with a sequence of alveolar stop and glide.

[13] The situation here is reminiscent of that
described by Hyman (1970) for Nupe and many other languages.

[14] There is one case of a vowel's, and therefore
possibly a glide's, being analyzed as a consonant, first
noticed by Dalby (1966b). The *-tang* suffix appears
(synchronically) only after l-final noun stems belonging
to the la class. The word for 'stones', *poutang LLH*, is
an exception to this generalization unless w/u is
interpreted as a consonant comparable to l. The second
pair shows the more regular process with stems of this
form.

3.2   Vowels

3.2.1   Vowel inventory

The vowels of Kisi form the following pattern, a pattern

common throughout Niger-Kordofanian-Congo.

(46)   Vowel inventory

                    i   u

                      e   o

                        E   O

                              a

Note: (All vowels can be long.)

Both /e/ and /o/ are closer than their symbols indicate.

Phonetically they approximate the higher vowels [I] and

[U]. Heydorn (1970) in some cases transcribes these

vowels with these symbols.

Lip-rounding and "tongue position" show a positive

correlation: front vowels are unrounded and back vowels

are rounded. The low central vowel /a/ patterns generally

with the back vowels, e.g., in conditioning the insertion

of [w] rather than [y] in an epenthesis rule.

A glide/vowel conditioning the -*tang* suffix

LL H   LL H
pouwo powtang   ` stone/s'
LH H   LH H
pOuwo pOulang   `chalk/s, powder/s'

Despite the evidence from this exception, the second part
of a vowel sequence will be interpreted as a vowel (see
discussion of diphthongs below).

(47) a conditioning glide epenthesis

```
L H   H   L L   H
poombO saa-wo          'Saa's son'
boy    Saa-NCM
L H   L   L L   H
kauw-i saa-we          'Saa's bean'
bean-NCP Saa-NCM
```

In the example above [w] appears before the noun class markers *o* *H* and *e* *H* rather than [y], which appears after front vowels, e.g., *sii* *HL* + *e* *H* --> *siiye* *HLH* 'top'.

In other respects, the phoneme /a/ patterns with the front vowels, as shown in the discussion of glide phontactics above, appearing after the labialvelar glide. Literate native speakers often write "va" for /wa/, suggesting that in some cases speakers classify /a/ with the other front vowels[15].

There is a case to be made for the pre-nucleus glides, /y/ amd /w/, being allophones of the high vowels /i/ and /u/. The evidence comes from slow speech and limited distribution. The Kisi Literacy Committee (KLC) has decided to represent these segments with the vowel symbols, and I have followed their practice where the particular segment is not at issue. I prefer to regard these segments as glides because of their phonetic nature and because they condition palatalization and labialization the way vowels, for the most part, do not.

---

[15] Hyman (1970), in an attempt to simplify his description of Nupe, posits two different underlying segments that are realized as surface [a].

Nonetheless, I will follow the practice of the KLC in representing the pre-vocalic glides with the corresponding vowels.

There are a number of unpredictable alternations between front and back vowels of the same height[16].

(48) Alternations between front and back vowels

<pre>
 L   L   H   L   L   H
bindullo / bindillo   'to shoot for someone'
 H H H   H H H
fofolo / fefele   'light in weight'
 L   LH   L   LH
cOngOO / cEngOO   'to rise'
</pre>

No such alternation, of course, is possible for the low central vowel /a/.

Another place that the contrast between front and back vowels is neutralized is in conditioning the surface forms of noun class suffixes.

(49) Front and back vowels conditioning identical
     allomorphy for noun class suffixes

<pre>
 L   L   H   L LH
fEfE + o -> fEfOO   'eaves'
Stem NCM
 LL L   H   LL LH
taamO + o -> taamOO   'menses'
</pre>

In the example above, both stem-final E and O condition the appearance of the same allomorph. Full

---

[16] Such alternations are not so unusual. Alternations between front and back vowels of the same height are also found in a Scots dialect; *[hem]* and *[hom]* for 'home' (Lass 1981:539) and *[sten]* and *[ston]* for 'stone' (Wells 1982:396). In Hausa there is no distinction between short *i* and *u* in closed syllables (Leben 1971: FN. 5, 217). Patterns such as these are also found in Slavic (Ohala p.c.).

exemplification of the parallels for vowels of other heights is given below in 3.6 Phonological rules.

A set of alternations exploited by the verbal morphology (see Chapter 6: Inflectional Morphology, Verbs) is related to the front-back alternations mentioned above. In this situation the alternation is between a sequence of vowels io or iO and a single front vowel of the same height, respectively e and E. In some environments, this alternation has not been grammaticized. One place where apparent free variation exists is in the system of verb extensions. Below I give examples from the middle extension for two verbs.

(50) Alternations between [io]/[e] and [iO]/[E]

```
  LL   R    H    L   R    H
tiondOngndo / tendOngndo        'to wake oneself'
  LL   R    H    L   R    H
kiOndOngndo / kEndOngndo        'to be picked'
```

This alternation is phonetically plausible, if we regard the simpler form (a single vowel) as derived. The first vowel [i] (actually the palatal glide) disappears after transferring its frontness and unroundedness to the back rounded vowels. It is thus a front-back alternation, differing from the others only with the addition of [i] preceding the back vowels. We thus see front-back alternations occuring in a number of different environments and exhibiting varying degrees of incorporation into the grammar.

The way pointed by these alternations, coupled with the information that Northern Kisi does not have the high front vowel in some environments where Southern Kisi does, e.g., *pOmndo RH* (NK) vs. *piOmndo LHH* (SK) 'death', suggests the source of the front-back alternation (and may be related to the palatalization differences discussed above). The fronting may have originally been caused by the presence of a palatal vowel or glide, which has since disappeared completely from Northern Kisi and now appears sporadically in Southern Kisi.

A general rule that affects all vowels is nasalization. Vowels are nasalized as the result of perseveratory nasalization from a preceding nasal consonant.

(51) Vowel nasalization

   L H
n[ǖǖ]   'my (o-class)'
   L H
m[ǖǖ]ng 'two'
   L H
ny[ŏ̃ŏ̃]   'thing'
   L H
ng[ŏ̃ŏ̃]   'to be burned'

This process of nasalization has partially neutralized the contrast between e:E and o:O after nasals. Because there are few appearances of the higher vowels after nasals, it seems that the neutralization there has gone in favor of the lower vowel, a not unexpected consequence (see Ohala 1974a; Wright 1986 for a discussion of height neutralization caused by nasalization).

3.2.2 Long vowels

All vowels have long counterparts.

(52) Long vowels

L L H L L H *kiiyo* *kiilang*	'palm wine dregs (sg/pl)'
L L H H *o kee le*	'She didn't hawk.'
H H *kEE*	'Refuse!'
L H L H H *kaa kaalang*	'attic/s'
H H H H H *kOO kOOwa*	'dark green snake/s'
L H L L H *koo koolang*	'rooster's comb/s'
H H H H H H H H H *kuubanOO kuubaa*	'warrior/s'

It should also be noted that vowel-lengthening has been used expressively in the ideophonic subsection of the language (see 4.7) and as a productive process in the morphology (see 6.3).

Long vowels are clearly longer than short vowels and are about the same length as closed rimes and vowel-diphthong combinations. In an instrumental study of Kisi rimes (Childs 1983), I measured the length of a number of different rimes, schematized below. The measurements were taken from the onset of noise for the sibilant to the cessation of voicing of the vowel or sonorant. In the first column I give the type of rime measured, in the second the actual duration (in milleseconds), and in the third column a representative example with its gloss.

(53) Rime measurements

Rime type	Mean (msec)	Examples	
CV	91	*so*	'horse'
C(G)VV	192	*suu*	'fish'
		syEi	'beard'
CVl	196	*sul*	'tree'
CVN	206	*sung*	'pestle'
CV + V	206	*so + o*	'horse'
		Stem NCM	

As shown above, the rimes with two segments were more than twice the length of the rimes with a single vowel (195 msecs vs. 91 msecs). The differences between the different types of rimes consisting of more than a single vowel were not statistically significant.

3.2.3. Vowel sequences and diphthongs

Establishing what are diphthongs and what are vowel sequences in Kisi is slightly problematic, but it seems possible to treat all sequences as two vowels. The following sequences are allowed.

(54) Candidate Kisi diphthongs

iu		*ui*	
ei	*eu*	*oi*	*ou*
Ei	*Eu*	*Oi*	*Ou*
	ai	*au*	

Tonal evidence is unrevealing. Both parts of each

sequence can carry a separate tone, as shown by the fact

that they can be associated with different tones.

(55)   Vowel sequences with different tones

L H
kau   'bean'   *kEi*   'thread'
L H
kou   'undercook (Past)'
H L
tEing   'spread in the sun to dry'

Furthermore, where unconditioned variation occurs, vowel

sequences alternate with sequences of long vowels.

(56) Alternations between vowel sequences and long
     vowels

LL L   H   LL L   H
bEilullo / *bEElullo*   'to beat for someone'
LL R   H   LL R   H
bEinOngndo / *bEEnOngndo*   'to be beaten'

Both of these extended forms (base forms with verb

extensions) come from the base verb *bEiyo LLH* 'to strip

(the fiber from)'[17].

Another piece of evidence is the measurements

mentioned above. The length of a nucleus with two

different vowels is the same as the length of a nucleus

with two vowels of the same quality.

Phonological rules suggest treating such sequences as

two vowels rather than as diphthongs. A glide epenthesis

---

[17] The base form itself represents another example
of how the vowel sequence behaves as a sequence of two
vowels rather than as a single vowel. If the sequence
were to be interpreted as a single vowel, the base form
would be either * *boo LH* or i.e., *bEi + o*. Because
speakers treat the sequence as being one of two vowels,
the conditioning environment for glide epenthesis, a glide
is inserted, producing *bEiyo LLH*.

rule between noun stem and noun class marker is
conditioned by the presence of two vowels in the preceding
syllable nucleus. The examples below show how the
sequence /Ei/ acts in just the same way as a double vowel.

(57)   Vowel sequences as two vowels

```
   L    H              L H
  tE + o    ->        tiO              'termite'
Stem  NCM
  H L    H            H L  H
  sii + e   ->        siiye            'spinning top (a toy)'
  L L    H            L L  H
  sEi + o   ->        sEiyo            'grave, porcupine'
  L L H    H          L L H H
  syEi + e  ->        syEiye           'beard'
```

Sequences of vowels are susceptible to simplification,
usually in favor of the first vowel, and they are realized
as two vowels rather than one.

(58)   Nucleus simplification

```
  L L  H              L L  H
  kOuwo     ->        kOOwo            'to be undercooked'
  L L                 L L
  hau       ->        haa              'today'
```

The weight of evidence, then, is clearly on the side of
treating vowel sequences as two vowels, and that is the
course that will be followed here.

3.3 Tone

3.3.1 Tonal inventory

Tone is crucially important to the Kisi language, serving both lexical and grammatical functions. In Kisi there are two level tones, a high and a low, and two contour tones, a rise and a fall, a not unusual pattern typologically (Maddieson 1970).

(60) Tonal contrasts

```
H                    L
i                    i
'I'          'it, i class'
  H H            L L   H L   L H
saa              saa saa saa
'October'        Saa grab sheep
                 'Saa grabs the sheep.'
  F              R              R          F
sal              sal            tOm        tang
'shark'          'rubbish pile' 'monkey'   'lightning'
  L L            L H              L  L       H  H
piOm             piOm           bolo       bolo
'statuette'      'death'          'bag'      'banana'
```

Both contour tones are relatively uncommon compared to the level tones, and if one of the two level tones can be considered "marked" (in the sense of Maddieson 1978), it is the high tone.

One reason for considering the high tone marked is that the high tone is the mark for a number of grammatical processes, e.g., focus marking, the distributive, etc. It is less common than the low tone, at least with regard to lexical tone on noun stems. When it functions lexically, it is not affected by grammatical tone processes; the low

67

tone, on the other hand, is often raised, e.g., when

proper names are found as direct objects (see discussion

of tone rules below).

$$
\begin{array}{c}
| \quad \backslash/ \\
kumbong
\end{array}
$$

Another reason for considering the high tone the

marked tone is that a high tone will not be displaced and

will override a low tone. For example, the underlyingly

unassociated or floating high tone associated with the <u>ng</u>

class suffix associates with the preceding vowel. (There

is actually something of a vowel there, namely, the

features [-high] and [+back] in a generative treatment;

this underspecified vowel causes the vowels of the stem to

change slightly yet never surfaces as a full vowel.) The

high tone associated with the noun class suffix becomes a

low-high or rising tone.

(61) The floating high of the <u>ng</u> class suffix

$$
\begin{array}{ccc}
\overset{\textstyle L \quad L}{\underset{\textstyle kumbu}{|\quad|}} \quad \overset{\textstyle H}{\underset{\textstyle [-hi]ng}{/}} & \rightarrow & \overset{\textstyle L\;\;L\;H}{\underset{\textstyle kumbong}{|\;\backslash/}} \qquad \text{`sides'}
\end{array}
$$

$$
\begin{array}{ccc}
\overset{\textstyle L \quad L \qquad H}{tende + ng} & \rightarrow & \overset{\textstyle L \quad R \qquad L \quad H}{tendong \;/\; tendong} \quad \text{`foreheads'}
\end{array}
$$

$$
\begin{array}{ccc}
\overset{\textstyle L\,L \qquad H}{ciE + ng} & \rightarrow & \overset{\textstyle L\,H}{ciOng} \qquad \text{`rice farms'}
\end{array}
$$

The second example shows how the low tone associated with

a full vowel in the stem may occasionally be completely

overridden by the high tone of the suffix. Full

exemplification of the phenomenon can be found in Chapter

5: Inflectional Morphology, Nouns.

Johnson (1981) has claimed that Kisi has a downstepped high tone. The dramatic downdrift in Kisi, it has been claimed, has been grammaticized. The result of this process is a "downstepped high" or simply "downstep"[18]. All of Johnson's examples are given below.

(62) Examples of the downstepped high

H D **H D**		
fuo *fua*	`rice bird/s'	
H D H		
kuei	`yam'	
L **H D**		
kovia	`eagles'	
H D H		
kposio	`palm-head cutter'	
H D		
sOOng	`small palm nuts'	
H H D		
cioong	`towns'	(Johnson 1981)

In a preliminary draft of a dictionary (Johnson 1986), the words, `palm head cutter', `yam', and `eagles' do not appear with this downstep symbol. In fact no such symbol appeared in his explanation of symbols accompanying the dictionary. It may be that Johnson no longer sees the need for a downstep, for that is the decision reached here.

Most of Johnson's examples can be seen as part of other phenomena. All but one of the examples above involve downstep at the morpheme boundary between stem and

---

[18] The term "downstep" was first used by F.D.D. Winston (1960) to describe the phonemicization of a phenomenon "described by M. Guthrie for a number of Bantu languages and by him called `toneslip' ["downdrift" in more modern terminology]" (Gleason 1961:295).

suffix, where the suffix is the final syllable of the word. Downdrift and a final fall could combine to give the impression of a high tone lower than a preceding high, particularly if the forms were elicited in a traditional elicitation session where each word would be a complete utterance.

The same combination of utterance final fall in an elicitation situation likely explains many of the final falling and low tones in Heydorn's (1970) examples.

(63)   Final falling and low tones in Heydorn (1970)

H   H H   L   H   H H   H L
fOngOfOngO   fOngOfOngoa   `hornbill/s'

L H H   L H F
fuloo   fululang   `bladder/s'

In my own data the word for `hornbill' has all high tones, and the plural of `bladder' has a final high parallel to the singular of the word (all other nouns in the language have a final High).

Such final lowering is not uncommon. In Kipare, a Bantu language spoken in Tanzania, there is a "Final Flattening Rule" which has the effect of lowering an utterance-final High to a downstepped High.

(64)   Final Flattening Rule in Kipare

H   H   D
ipanga   `machete'
H   H   H   H L
ipanga ledi   `good machete'
D
mbu   `mosquitoes'
H   H L
mbu jedi   `good mosquitoes'

A final downstepped high is also lowered; it becomes a low
through a "Final Lowering Rule" ordered before Final
Flattening (Odden 1986:368-70).

In another set of examples (Johnson 1982), a downstep
appears in certain grammatical environments as well. In
the first pair of examples below (Perfective Affirmative),
the underlying tone on *kumOO HHH* is high and the first
tone is downstepped when the word appears as a direct
object. Words with initial low tones (here *cuingndo LLH*
'goat') are left unchanged. In the second example
(Perfective Negative), the first tone on the following
word is a downstepped high no matter what the underlying
tone is.

(65)   Grammatical downstep

<u>Past Affirmative</u>

```
L   H   LH   D  HH
fallo nEi kumOO
'The man stepped on the tree.'
L   H   L   H   LL      H
fallo timbi cuingndo
'The man loosened the goat.'
```

<u>Past Negative</u>

```
L   H   LH   D  HH   L
fallo nEi kumOO le
'The man stepped on the tree.'
L   H   L   H   DL      H   L
fallo timbi cuingndo le
'The man did not loosen the goat.' (Johnson 1982:2)
```

The downstepped high tones in the grammatical environments
given above also have a straightforward explanation. It
is clear that Kisi has downdrift, as noted by Welmers

(1976) and indicated by the measurements given in Figure 2 below. There seems to be a major constituent boundary between verb and direct object. In my instrumental work I found that the final syllable of the verb was lengthened considerably and that the drop between the tone of the final syllable of the verb and the first syllable of the following object was much greater than that between the subject and the verb. This lowering took place regardless of whether the following tone was low or high, and the drop was particularly evident in just the environment specified, after the extra-high tone used for the General Negative (see discussion below)[19].

---

[19] There are other examples of a downstep in transcriptions furnished to me by Tamba Mayson, a teacher in the Kisi Literacy Program. They all are explainable by reference to downdrift and have not yet been lexicalized or grammaticized.

```
     L    L   HD   H   H  L   H    HH   D   HL
    te num oo nO fonda pE, naa ng kuE
    if you Imperf have place if, us we go
    'If you would have the chance, we would go.'
    H   H L   H   D H
    i sina ndu kOlO
    I know him ways
    'I know his ways.'
```

Note how the downstep in the second example is not immediately after the verb but rather is after a personal pronoun indirect object. This suggests that the major constituent boundary is after the first argument of verbs with the benefactive extension and pronoun benefactees. This is parallel to a phonological process at the segmental level that has affected several Kisi pronouns, *num* H 'you' and *ndu* H 'her, him, it'. Both can be reduced to [ng].

Thus, Johnson's downstep is really part of a larger syntactic phenomenon and can be represented at a more general level. It does not seem necessary to posit lexical downstep; it can be subsumed as part of the more general process of downdrift in conjunction with the extra-high tone (the latter is also used in Johnson's (1982) analysis).

This larger phenomenon is one that seems dependent on syntactic and other boundaries. For example, a downstep is required between verb (with object pronoun) and a following noun phrase. It is also necessary after a non-subject pronoun and a high-toned (coreferent) subject pronoun.

(66) Other environments in which downstep occurs

```
H  D  H  L L   H
ya i co lakO long          `As for me I'm going there.'
me I am going there
```

In addition to the tones posited above, there is an "extra-high" tone which is used in several grammatical environments. The extra-high tone is used in conjunction with the sentence-final negative particle *le H* to differentiate the Negative Past from the Affirmative Past.

(67) The extra-high tone

```
L   L H  H
a data ya              `You condemned me.'
L   L H+ H  H
a data ya le           `You didn't condemn me.'
```

The extra-high tone is higher in frequency (155 Hz vs 144 Hz), louder (82.9 dB vs 80.0 db), and longer (199 vs 193

msec) than the regular high tone (all perceptible differences), and informants insist on a distinction between the two (Childs 1988a).

Another tonal feature that needs to be discussed is the phenomenon of contour tones. Diachronically, contour tones in Kisi have arisen from the loss of a consonant intervocalically (usually *l*), and the truncation of a sequence of two vowels to a single vowel.[20]

(68) The origin of contour tones from earlier sequences of single level tones

$$\begin{array}{ll} & \text{R} \quad \text{H} \\ \textit{milindo} & \textit{mingndo} \qquad \text{`nose'} \\ \text{L L H} & \\ \textit{paalIng} \text{ / } \textit{palalIng}^{21} \text{ `sun, day' (Heydorn 1970:169)} \\ \text{L H H} & \\ \textit{paaleng} & \qquad\qquad \text{`sun, day'}^{22} \end{array}$$

The first example shows the word for `nose' as it was recorded by Northcote (1916) followed by its present-day form. The second example shows a synchronic alternation of Heydorn's (1970 but fieldwork done in 1930's), which in my notes was only given with a long vowel. The word for

---

[20] See Hyman and Schuh 1974 for a discussion of the types of tone processes that occur.

[21] Heydorn (1970) does not mark all vowels with tones. For example, the word for 'sun, day', he renders,

$$\begin{array}{cc} \text{L} \quad \text{H} & \text{L} \quad \text{H} \\ \textit{paalIng} & \textit{palEi} \end{array}$$

I am assuming that the unmarked vowels have the same tone as the previous vowel.

[22] The plural of `sun, day' shows the earlier stem: *palEi* LHH from *pala* LH + *i* H.

'sun, day' thus seems a likely candidate for eventually receiving a contour tone. As is clear, when segmental material is lost, the tones often persevere.

The process seems at work in several synchronic alternations, and in dialectal variation.

(69) Synchronic evidence of contour tones derived from sequences of unlike tones

```
H L    F
vElE / vE              'again'
H   L HH    H  R  H    H   L H L     H  R  H
fondoloo / fondollo    fondololang / fondoltang
'an edible leaf'       'edible leaves'
H LH   H LH    F  H
malaa  malaa / malla   'fish bait (sg/pl)'


L H    H
piOmndo          'death' (Southern Kisi)
R    H
pOmndo           'death' (Northern Kisi)
```

Contour tones in Kisi, then, may all once have been sequences of level tones (see Hyman & Schuh 1974). Although it is possible to see contour tones as sequences of level tones, it is not necessary to represent this diachronic fact in a synchronic description. For typographical ease and for greater adherence to the surface facts, contour tones will be represented with a separate symbol despite their decomposability. In general, contour tones are used only sparingly and appear almost exclusively within closed syllables.

The tonal behavior of ideophones in Kisi is quite remarkable, so remarkable that it will be reserved for separate discussion (Section 4.7). Kisi ideophones

exhibit a much greater exploitation of the human range of pitch[23], using both raised and lowered registers, as well as a number of other phonological features not found elsewhere in the language.

3.3.2 Tonotactics

A few generalizations are possible about the distribution of tones in the language. With regard to nouns, almost any tone sequence seems possible, although the pattern seems to be that noun stems are generally low-toned.

On noun stems with a single vowel any tone is possible, although contour tones appear infrequently and then only on closed syllables, as is the case throughout the language.

(70) Tones on monosyllabic noun stems with single vowels

H	L	H	L
te	*tE*	*bol*	*bol*
'unruliness'	'termite'	'valley'	'penis'
H	L	R	F
bEl	*tol*	*sal*	*sal*
'palm nut'	'zinc'	'rubbish'	'shark'

There are no limitations on the level tones that can appear on noun stems of either two syllables or monosyllabic stems of two vowels.

---

[23] "Pitch" is technically used to refer only to the perceptual correlate of changes in fundamental frequency. In the remainder of this work I will use pitch to refer both to the perceptual correlate as well as to the physical value in fundamental frequency.

(71) Simple tones on bisyllabic noun stems with single vowels and monosyllabic stems of two vowels

H H	H L	L H	L L
bolo	*bundE*	*bOta*	*bEsu*
'shuttle'	'story'	'fist'	'broom'
H H	H L	L H	L L
cie	*ciEng*	*taang*	*bEu*
'shuttle'	'story'	'fist'	'broom'

Contour tones appear only on syllables with single vowels. That is, a level tone and a contour tone will never appear together associated with the same syllable.

This constraint can be seen in the behavior of the Middle verb extension, which is suffixed to base verb stems. The Middle morpheme is the only verb extension with a tone assigned lexically.

(72) The rising tone on the middle extension

	Base infinitive	Middle infinitive
	L H	L R H
	cOm + ndo	*cOm + nOng + ndo*
'show'	Stem + Suffix	Stem + Middle + Suffix
	L L H	L R H
'flog'	*benggi+c*	*benggingndo*

In situations where there are two vowels in the syllable representing the middle morpheme, the tones associated with the two vowels are a sequence of a low and a high. This is evident in the middle plural form of the verb.

(73) The LH sequence on the middle extension

	Base	Middle	Plural	Middle plural
	L L H	L R H	L L H	L L H H
'look'	*tofaa*	*tofangndo*	*tofia*	*tofiangndo*

        L LH   L R   H   LL LH   LL LH   H
'flog'   *tEndaa*   *tEndangndo*   *tEEndia*   *tEEndiangndo*

The rise on The Middle is represented by the LH sequence on the vowels *ia*.

The avoidance of a sequence of a contour tone and a level tone can be seen again in the synchronic alternation between the two forms for the middle extended form of the verb 'to cheat'.

(74) The LH sequence alternates with the R tone

<u>Base</u>   <u>Middle</u>

 LL H   LL R   H   LH   H
huiyo   *huinOngndo* / *huingndo*   'cheat'

L R   L H
V V -> *V V*

Schematically the process can be seen as that shown above, a sequence of LR is simplified to LH.

A further tonotactic generalization about contour tones is that contour tones on two-syllable stems are more common on the <u>second</u> syllable. Phonetic material seems to be eroding from the ends of words rather than from the beginning; tones are stranded and eventually attach to the preceding syllable creating a contour tone on a closed syllable[24].

---

[24] Facts such as these, of course, have bolstered or even motivated the autosegmental treatment of African tone, e.g., Leben 1973, Goldsmith 1979. Because the same tonal pattern appears whether the word consists of one, two, or three syllables, the tonal level is construed as being independent of the segmental level.

(75) Contour tones on bisyllabic noun stems with
      single vowels.

L R	L F	H R	H F
boling	*dulOng*	*fondol*	*tiwOl*
'harp'	'drum'	'green'	'fox'
			F H
* R L	* F L	* R H	*kanggbo*
			'pigeon'

The word for 'pigeon' is the only example of a contour

tone appearing on the first syllable and a level tone on

the second syllable (of stems).

Three-syllable stems are not so common, yet the same

generalizations hold true. There are no restrictions on

the sequence of level tones on noun stems. Monomorphemic

noun stems of three syllables, if they have contour tones,

have them on the final syllable (see Footnote 23).

(76) Tones on tri-syllable noun stems with
      single vowels

H H H	H H L	H L H	L H H
danggala	*dalapo*	*fondolo*	*tandangpol*
'boundary'	'flag'	'green'	'butterfly'
H L L	L H L	L L H	L L L
tombosE	*tabili*	*cElEkpE*	*mEsela*
'rat'	'drum'	'child'	'thinness'
L L F			
fulubung			
'grasshopper'			

The four- and five-syllable stems that cannot be

analyzed as compounds or reduplicated stems are too few to

make any generalizations. There are no five-syllable

stems with single vowels that can be analyzed as being

monomorphemic.

3.3.3 Tones on verbs

Verbs can generally be interpreted as having no lexical tone. Tone is assigned grammatically to register tense and aspect distinctions. The one exception is a class of mono- and di-syllabic stems in the Past (discussed in Chapter 6: Inflectional Morphology, Verbs).

As far as verbs with extensions are concerned, the assignment of tone to extended forms is perfectly regular. The one exception is verbs with the Middle extension (representing 'passive, self-inflicted action, etc.'). Here we must see the Middle morpheme as possessing lexical tone. The regular tonal pattern for verbs in their citation form is a series of low tones with a high on the final suffix. Verbs with the Middle extension have a rising (or high) tone on the Middle morpheme.

(77) Extended and non-extended verbs

Stem	Base infinitive	Middle infinitive
	L	L H	L R H
'sit'	cal-	callo	calnOngndo
	L L	L LH	L R H
'awaken'	tindi-	tindio	tindingndo

This lexical tone associated with the Middle morpheme remains in finite forms, e.g., the Past, as shown above. In all other cases verbs have low (or perhaps no) tones and acquire their tonal patterns from the inflectional morphology.

3.3.4 Tones on adjectives

The most common pattern for tones on (non-derived) adjectives is a series of low tones, but virtually any tonal pattern is allowed.

(78) Tones on adjectives

<div>
H H H
<i>kaama</i>   `amazing, incredible, wonderful'
L H
<i>tase</i>   `first'
H L
<i>celeng</i>   `other, another, some'
L   L
<i>bEndu</i>   `big'
H LLL L LLL
<i>buliEEbuliEE</i>   `fertile'
</div>

Adjectives which are related to verbs follow a similar pattern. The one difference here is that a sequence of HL is not found. If high tones appear on verbal adjectives, they are found on non-initial syllables.

(79) Tones on verbal adjectives

<u>Infinitive</u>   <u>Adjective</u>

<div>
                        L L LH   L L L
`be slippery' <i>culukaa</i>   <i>culuka</i>
                        LL LH   LL L   LL LL
`clean'   <i>diondOO</i>   <i>dianda / diandEi</i>
                        L   H   L H H
`smell'   <i>cungndo</i>   <i>cungEi</i>
                        L L H   L H H H
`be fat'   <i>celullo</i>   <i>celullEi</i>
                        LLH   LL
`eat'   <i>dioo</i>   <i>dia</i>
</div>

The examples above represent adjectives related to the base form of verbs. Adjectives formed from the middle form of verbs follow a more regular pattern and retain the high (or rising) tone of the middle extension.

(80) Tones on middle adjectives

	Base	Middle	Middle adjective
	L L	L R H	L R
'sweep'	basu	basOngndo	basang
	L L	L L R H	L L R
'hawk'	kaa	kaanOngndo	kaanang
	L L	L H H	L L R
'encircle'	tiu	tiungndo	tiilang

It is only the middle morpheme that will receive this rising tone. All other (preceding) tones are low.

In summary, adjectives which are not related to verbs occur with any tonal pattern. Adjectives which can be related to verbs are more restricted in the tonal patterns they can have.

3.3.5 Tones on other words

There are few generalizations that can be made about tones on other words. In the case of adverbs, prepositions, and other words, there are few grammatical processes involved and tone must be seen as being assigned lexically.

3.3.6 Tone assignment

In an autosegmental treatment, tone can be interpreted as being assigned from left to right, as shown in the examples below. The normal sequence of tones for the past (with the third person singular pronoun as

subject) is LH[25]. On monosyllabic verbs the sequence is a

rise (R), on disyllabic verbs LH, on trisyllabic verbs

LHH, and on four-syllable verbs, LHHH.

(81) Tone assignment

Infinitive (Stem + o H / OO LH)	Past (Stem + LH)
L LH sangOO 'to sow'	L R o sang 'She sowed.'
LH saa 'to hold'	L LH o saa 'She held.'
L LH sangaa 'to tire'	L L H o sanga 'She's tired.'
L L LH sanggalaa 'to praise'	L L H H o sanggala 'She praised.'
L L L HH sukasukaa 'to rinse one's mouth'	L L H H H o sukasuka 'She rinsed out her mouth.'

In the first column are the stems plus the infinitival

suffixes -o H and -(O)O (L)H. The verb stems are all

underlyingly low. With respect to the tensed forms, in

autosegmental terms the sequence LH is associated from

left to right with the high tone spreading rightwards

according to principles well established in other

languages.

As the examples above suggest, the relevant unit for

tone assignment is the syllable. Instead of a sequence of

LH being assigned to the first two vowels (morae) in a

---

[25] A small class of verbs does not follow this pattern. These verbs have no high tones in the Past. These verbs are discussed in Chapter 6.

verb, each tone is assigned to a syllable and the tone associates with whatever vocalic material is present.

(82) The assignment of tone by syllables

```
L   LL HH
o kuusuu                          'He vomited (repeatedly).'
L   LL HH    H  LLL  H
o taalial ya cuEiyang      'He poured oil for me.'
```

If tone were assigned by morae as in an autosegmental treatment, the LH sequence of the past would be assigned to the first syllable and the tones to the right would be high.

In other parts of the verbal morphology, we see evidence that it is not possible to associate three tones with a single syllable. If we see a rising tone (R) as consisting of a sequence of LH attached to the middle morpheme (*Ong/ung*) in the following example[26], the second part of the sequence, the high tone (H), is not able to associate with any segmental material in the verb. The first part of the sequence, the low tone (L) doubly associates with the H assigned by the past morpheme to produce a falling tone on the final vowel in 'told'.

(83) The tone of the middle in tensed verb forms

```
L    L   R      H
dim-ul-Ong-ndo        'to tell (someone)'
tell-Ben-Mid-Inf
L   L   H   F
o dim-ul-ung          'He told (someone).'
he tell-Ben-Mid
```

---

[26] The vowel change is irrelevant to the argument.

The presumably unassociated High of the lexically assigned Rise seems to have no effect on following syllables.

Tone is used grammatically in several other parts of the language. It is used in the focus construction with *ni H*, and incipiently in the distributive construction when the segmental morpheme associated with the construction *o H* disappears. Its use in these constructions will be discussed in detail below.

The evidence from a secret language reinforces the approach which treats tone as being lexical at least for part of the language. In *KpelemEiyei*, a secret language spoken (usually) by young males in the Mendekorma area of Liberia, syllables retain their tones when transposed.

(84) Kisi and KpelemEiyei

<u>Kisi</u>   <u>KpelemEiyei</u>

```
 L      H            H    L
tung.ndo            ndo.tung        `dog'
 L L    H            H    L L
nyaa.yo             yo.nyaa         `cat'
```

Note: "." represents a syllable boundary.

The evidence from *KpelemEiyei* suggests that tones are associated with segments before the transpositions characterizing the secret language take place[27].

In fact this split between word classes as regards the phenomenon of tone assignment (especially with regard

---

[27] See Hombert (1986) for a discussion of how African tone differs from Asian tone in being less "segmental" on the basis of evidence from word games, contrary to the evidence presented here.

to verbs and nouns) is not an uncommon one and has been found in many Bantu languages, e.g., Kimatuumbi (Odden 1985).

3.4 Intonation

One aspect of Kisi intonation that has already been mentioned in connection with downstep is downdrift[28], a phenomenon that affects the absolute level of like tones in a sequence. The general phenomenon is that tones fall in pitch as the utterance continues. In other words, a high tone at the beginning of the sentence will have a much higher tone than a high tone at the end of the utterance.

(85)   Downdrift in Kisi

L^1 H^1H^+ H^2 L^2 H^3
a data tamba le   'You (pl) didn't condemn Tamba'.

	L^1	H^1	H^+	H^2	L^2	H^3
$F_\emptyset$	124.5	139.8	152.5	136.0	83.5	93.3[29]

---

[28] See Ladd 1984 for a discussion of the interaction between downdrift (more generally known as "declination") and tone.

[29] These values are averages of samples taken at 20 msec intervals over the course of the vowel. See Childs 1988a for a full explanation of procedures used in the experiment from which these values were taken.
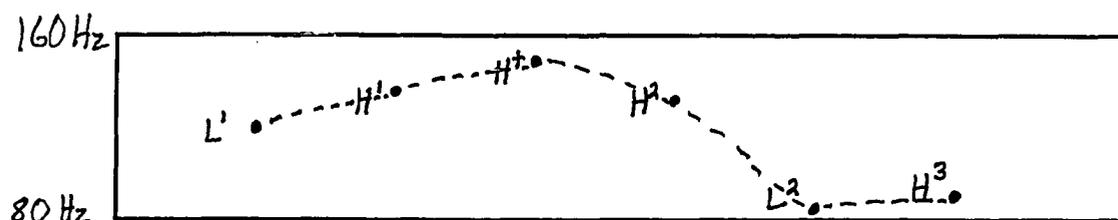
Figure 2: Downdrift in Kisi

In the sentence above, we see how the pitch decreases for both low tones and high tones. The first low tone (L^1) has an average value of 124.5 Hz, while the last low (L^2) averages just 83.5 Hz. The high tones similarly decrease from 139.8 Hz (H^1) down to 93.3 (H^3).

Welmers has also noted the dramatic downdrift in Kisi. After remarking,

> Vai is a discrete level language with two tones
> ... [with] no appreciable downdrift conditioned
> by a low tone between two tones
> (Welmers 1976:29)

he continues in a footnote,

> Less than two weeks before these sentences were
> transcribed, some sentences were heard and
> transcribed in Kisi, with the same number of low
> tones preceding high tones. In Kisi, each high
> tone after a low was at least one musical step
> lower than the last high tone before it. The
> tones of Vai are a reminder that one should not
> assume that downdrift is the norm in tone
> languages ... The fact remains that the pitches
> of alternating low and high tones in Vai are
> vastly different from those in actual terraced-
> level languages such as Kisi, Igbo, or Efik ---
> or, as discovered more recently, Kono!
> (Welmers 1976:148)

In some languages the lower declination low line (that determining the lowest level that low tones can reach) shows little change, and the upper declination line falls

more rapidly, e.g., Bambara (Mountford 1984). In Kisi it
seems that both the lower and upper declination lines
fall, as schematized below.
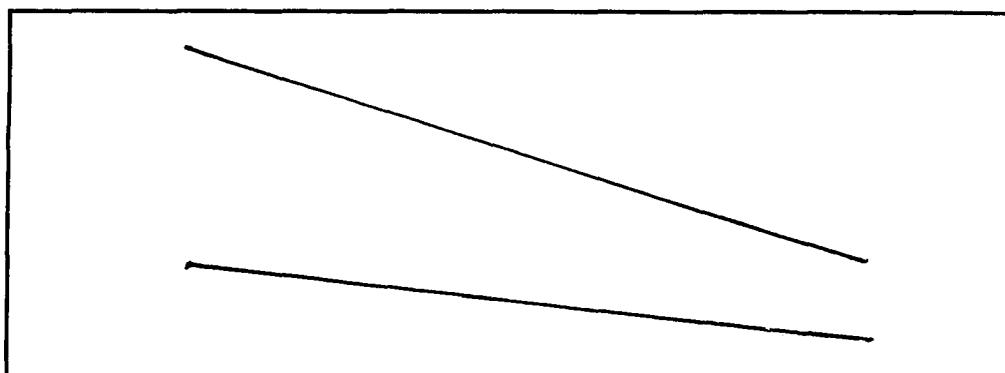
Figure 3: Declination lines in Kisi

Only a few intonational contours have been identified
thus far. Simple declaratives have a final falling
contour, as do questions with a question word. The long
form of question words, i.e., with *nE L* affixed, all have
a dramatic rise-fall tune. The prominence of the tune is
perhaps due to its initial position, i.e., before
downdrift reduces the pitch range.

(86)   Question words in Kisi

L H L	L H L	L H L	L H L
yEE-nE	*nEE-nE*	*kuEE-nE*	*wEE-nE*
`what'	`who'	`where'	`what, how'

Besides a question particle *yE L* attached to the first
finite part of the verb, this type of question (WH
question) has no other distinguishing mark. In WH
questions there is a final fall and relatively rapid
declination just as there is with statements.

Other questions (Yes/No) have a final rising intonation with no other distinguishing marks, i.e., particles or change in sentence order. Usually the final syllable has an extra-high tone (or one not within the declination lines within which the high and low tones operate for statements) appended to it, resulting in a dramatic final rise.

Conditional or temporal subordinate clauses begin with an extra-low tone (*te L*) and end with an element possessing a dramatically rising contour (*pE H* in afirmative and *le H* in negative clauses).

(87) The intonation pattern of the conditional clause

```
L   L   L   R      L L   H   L     H   H     H   H 30
o co hindOng, te o we ma nyindi ndu le
it Cop swell, Conj it Cop Conj-you compress it Neg
'It will swell up if you don't compress it.'
L   L     H L  LL   L L  H     L L  LH  H     L    L L  LL  H
te bungnde i bii wana pE, kpisingia tung ng kpisingia ni
Conj cold it catch person Conj, sneeze only it sneeze Foc
    'If one contracts a cold, one can only sneeze.'
```

All of these intonation contours override lexical tone and exhibit a wider range (and wider variation) than do lexical tones.

3.5 Kisi syllable structure

3.5.1 Canonical syllable structure

The basic configuration of the syllable in Kisi is CV. This fact constrains the allowable sequences when

---

30 The tone marks do not accurately represent the contour of the subrodinate clauses in these examples.

morphemes are attached to one another, as will be seen in the section on phonological rules. There are a few variations on the basic CV configuration as represented below (given first in 2.0):

(88) Kisi syllable structure

$$C \ (G) \ V \ (V) \ (\begin{smallmatrix} N \\ L \end{smallmatrix})$$

The "(G)", representing an optional pre-vocalic glide, is represented elsewhere by the corresponding vowels, following the practice of the Kisi Literacy Committee. Tones, of course, are associated with the syllabic material.

3.5.2 Nativization patterns

The syllable structure conditions given above determine the shape of borrowings. Consonant clusters are broken up and onsetless syllables are provided with consonants. The fricative /h/ serves the function of preventing borrowed words from beginning with a vowel.

(89)   [h] beginning borrowed vowel-initial words

hanya H L	'to iron' (< English 'iron')
hala L LH L L H	'God' (< Arabic 'Allah')
hawaa hawalang	'hour' (< English 'hour') (Heydorn 1970:168)

Here /h/ performs a function comparable to that described by the glide-epenthesis rule (see discussion below), that is, in preventing the occurrence of empty onsets.

In the examples below we see how disallowed consonant clusters are broken up, usually with the high vowels /i/ and /u/, but also with /a/.

(90) Nativization of consonant clusters

L HL L
sukuuwo   'school' (< English *school*)

L HH H   L HH H
bileeyo   bileelang   'a round basket of cane or piassava palm' (< Krio *blay* < Portugese *baïaio*) (Fyle & Jones 1980)

H H LH   H H L H
dalapoo   dalapolang   'flag' (< French *drapeau* 'flag')

Epenthetic vowels are always short while other vowels are often interpreted as being long (see also 'round basket' above).

(91) Nativization of vowels

HH H   LH H
siimEndiiyo   'cement' (< English *cement*)

HH LH H
bOOtiiye   'button' (< English *button*)

LL LH
fOOlio   'lined up, standing in a straight line' (< Eng *fall in*)

Phonemes not occuring in the language are replaced. In the first example below, the voiced palatal in *faji* is nativized as a voiceless palatal. In the second example, the same process occurs because Kisi has no voiced velar stop in initial position, i.e., it is realized as [k]. Another way that [g] has been nativized is as /ng/, as in the third example.

(92) Nativization of consonants not occurring in Kisi

H HH   H H H
facio   facilang   'bucket' (< Mende *faji*)

```
L  LH HH    L LH  H
kolEinOO  kolEiya        'Gola person'
LL L LH H       LL L LH H
nggoiyawEileng nggoiyavEiyang    'guava'
```

Proper morphological affixes are added as well. In the
examples below, a noun class ending is added, locating the
borrowed word within a noun class.

(93) Nativization patterns

```
H  HHH
kafioo            'coffee' o class (< English coffee)
F   H   F  H
tollo  toltang       'zinc roofing' o/la classes (from
                      French tólègalvanized sheet
                      iron')
```

As may be inferred from the examples above, borrowed words
have more high tones than would be expected on the basis
of the pattern in the rest of the language. Most borrowed
words are nouns, and although nouns allow most possible
tone patterns, borrowed nouns generally have high tones.

(94) High tones on borrowed words

```
HH  H    HH  H
kiiye  kiiyong       'key' (< Eng key)
HH LH H    HH LH H
kuatEiyo  kuatEilang     'ditch' (< Eng gutter)
H  H HH H    H  H HH H
jEnEvEiyo  jEnEvEiya     'lightning bug' (<Eng
                          generator)
```

It is generally true that high tones are found on
stressed syllables of borrowed English words, as in the
first two examples.

3.6 Phonological rules

3.6.1 Excursus on the morphology of Kisi

Before discussing the phonological processes of Kisi, a brief look forward to the morphology needs to be made[31]. As mentioned above, Kisi has a fairly extensive morphology, especially with regard to verbs and nouns. Kisi is a noun class language, and all nouns in the language belong to one or more of the seven noun classes. Modifying elements, such as adjectives, show agreement with the nouns they modify. The syntax of the construction is that the noun replaces its suffix (NCM) with the corresponding pronoun (NCP) and the suffix is attached to the end of the adjective.

(95) Noun-adjective agreement

```
 L   H                      L  L              L
mEng-ang  'water'          tingi-  'black'   ma  NCP
Noun-NCM
 L   L   L  L H
mEng-ma tingi-ang          'black water'
Noun-NCP  Adj-NCM
```

The order of elements, then, in such structures is Noun-Noun Class Pronoun (NCP) Adjective-Noun Class Marker (NCM)[32]. A similar arrangement occurs in compounds. The

---

[31] For a fuller discussion of morphology, see Chapter 5: Inflectional morphology, nouns; Chapter 6: Inflectional morphology, verbs, and Chapter 7: Derivational morphology.

[32] There is one exception to this pattern, the o-class. Nouns from this class do not replace their displaced suffixes (NCM's) with corresponding pronouns, as is the case with all other noun classes. The suffix is simply deleted as is the case with the singular of 'dog' in the next example.

morphological shuffling around of elements allows for a great deal of interaction between stems and affixes.

An illustration of the (morpho-)phonological environments in which, for example, a noun stem can appear is given below.

(96) Noun stems and affixes

L	H		L	H
tung	+ *o*	->	*tungndo*	'dog'
L	H		L	H
tung	+ *a*	->	*tungnda*	'dogs'

L LH
tung nuu[33]   'my dog'

L   L H
tung numndo   'your dog'

L   L L H
tung-a ni-a   'two dogs'
Noun-NCP Poss-NCM

L   H
tung kung   'that dog'

L   L L
tung-a kang   'those dogs'
Noun-NCP Demon

The environments above allow for straightforward identification of both stems and affixes.

With regard to verbs there is not quite so much shuffling around of morphemes. Besides the suffixed infinitive marker, there are four verb extensions, most of which are realized as suffixes.

---

[33] I have followed the practice of the Kisi Literacy Committee of Liberia in separating possessive adjectives from the nouns they modify.

(97) Verb suffixes

<u>Infinitive</u>

Base form: $\overset{\text{L H}}{-(o)o}$

Extended forms: $\overset{\text{L H}}{-(o)o}$

<u>Verb extensions</u>

Causative: $\overset{\text{L}}{-i}$

Benefactive: $\overset{\text{L}}{-lul}$

Middle: $\overset{\text{R}}{-nung}$

Plural: Vowel lengthening and other processes

The mark of tense and aspect distinctions is, for the most part, tone, although there are accompanying changes in the stem vowel for some verbs. These changes will not be discussed here but rather in the chapter on verbal morphology.

Other morphosyntactic processes precipitating phonological changes are reduplication, the distributive, and adjective formation from verbs. Several syntactic processes, such as question formation, involve the use of function words of little phonological content (particles) which are also affected by phonological environment. Below I give generalizations which characterize several different processes. Changes limited to one morphosyntactic environment are discussed only in the section (on morphology) dealing with that process.

3.6.2 Segmental rules

One phonological rule characterizes the homorganicity of nasal sequences, when the first element is the velar nasal. The velar nasal assimilates to the place of articulation of the following segment and can even disappear completely. (All of the intermediate forms are possible.)

(98) Place assimilation and nasal cluster reduction

L		H	L	H		L	H		L L	H		L	H
tung + *ndo* -> *tungndo* -> *tunndo* -> *tuundo* -> *tundo*
dog NCM

R		H		R	H
tOm + *ndo* -> *tOmndo* (-> *tOmdo*) 'monkey'

It is rare that the velar nasal retains its place of articulation in such environments. The bilabial nasal is unaffected; the only possible change that could take place is that the nasal compound stop loses its initial nasal component, as shown in the second example.

General nasal cluster reduction rules have likely produced such lexicalized pronoun alternations as those shown below.

(99) Pronoun reduction

Full form   Reduced

H			H	H
num	'you'		*n/ng*
H			H	
ndu	'him, her'		*ng*	
L			L	
nang | 'we' | | *ng* | |

Another process serving to reduce consonant clusters is that deleting /l/ before other consonants (cf. Sapir

1965:18 for a similar phenomenon in Diola-Fogny). In Kisi
there is a play on words involving this process. The word
for `chest' and the compound word for `ant bridge' sound
identical if the pre-consonantal /l/ is deleted.

(100) /l/ reduction

```
 L    L H
tal-kpa-a              `driver ant bridge'[34]
bridge-ant-NCM
 L   L H
takpa-a                `chest'
chest-NCM
```

Historically the lateral phoneme has disappeared between
vowels, as discussed above with reference to the rise of
contour tones.

The only time /l/ cannot be deleted is when it
belongs to the first part of a geminate, e.g., *wallo HH*
`work', or when it begins a word, e.g., *lOO LH* `to beat'.
Otherwise it either disappears or assimilates to
neighboring segments.

Vowels will frequently be brought next to each other,
as in the noun class system, when the noun class marker
is removed and transferred to another position. The
situation with respect to the vowels is quite complicated;
Table 2 below illustrates some of the processes.

Generally what happens when vowels are brought
together (assuming there is no violation of morpheme

---

[34]   A `driver ant bridge' is the bridge army or
"driver" ants make with their bodies to overcome such
obstacles as bodies of water, gullies, and the like.   The
bridges are made of the bodies of their comrades.

structure conditions[35]) is that suffixes with back vowels

(-o and -ong) cause the stem-final vowels to be backed

while the low-central vowel (suffixes -a and -ang) cause

no apparent changes. The i class suffix raises stem-

final a to [E], causes final back vowels to be fronted and

/u/ to be lowered as well. The table below summarizes the

interactions which take place.

Stem-final vowels

NCM	i	e	E	a	O	o	u
-o	-io	-io -oo	-OO	-aa	-OO	-oo	-oo
-a	-ia	-ia	-ia	-aa	-ua	-ua	-ua
-ei	-iei	-ei	-Ei	-Ei	-Ei	-uei	-ei
-(O)ng	-iong	-ong	-Ong	-ang	-Ong	-ong	-ong
-ang	-iang	-iang	-iang	-aang	-uang	-uang	-uang

Table 2: Noun class vowel sandhi in Kisi

A set of alternations indicates that the language

seeks to preserve canonical syllable structure (a process

that has been discussed as a "conspiracy", e.g.,

Kisseberth 1970). I have discussed elsewhere the

treatment of these processes in a unified rule involving

autosegmental formalisms (Childs 1985). One effect of

this rule is to insert a glide (homorganic with the

preceding vocalic segment) before a suffix.

---

[35] If there is a violation, e.g., a sequence of
three vowels, then a rule of glide epenthesis occurs,
discussed below.

(101) Glide epenthesis

$\emptyset$ -> G [alpha rnd] / V V [alpha rnd] + __ V

```
  L L      H              L L  H
  suu  + a    ->          suuwa              'fish (pl)'
  L L      H
  sii  + ong ->           siiyong            'tops'
```

Parallel to the Glide-epenthesis rule is a rule which inserts an <u>l</u> in the same position when the morpheme to the left of the boundary ends in an <u>l</u>, causing a geminate to arise at the boundary.

(102) <u>l</u>-epenthesis

```
  L       H             L   H
  hEl  + e    ->        hElle              'salt'
  L       H             L   H
  fal  + o    ->        fallo              'elder'
```

This is the only example of gemination in the language (but see discussion of the phoneme /t/ above (3.1.2.4 Voiceless stops) for a few examples of another geminate).

A second type of rule designed also to break up disallowed sequences inserts the alveolar nasal compound stop between a stem-final nasal and a vowel-intial morpheme.

(103) <u>nd</u> epenthesis

$\emptyset$ -> nd / N + __ V

```
  L       H         L       H
  ying + i    ->    yingnde                'hair'
  R       H         L       H
  hem  + o    ->    hemndo                 'gourd'
```

This set of rules has some unity in that all three rules seek to prevent a vowel-initial morpheme from reaching the

surface without an onset. We also see the perseverance of stem-final features onto a following onsetless syllable.

Kisi speakers provide onsetless borrowings with an onset. As shown in "Nativization patterns" above, we see *hala LL* `God' (< Arabic `Allah'), which has been provided and [h]. This pattern extends itself into second languages used by Kisi speakers. For example, the Krio word *una* `you-all' is pronounced [huna] by some Kisi speakers. In the case of these words, because there is no possibility of attaching to some preceding segment that will furnish the segmental material for the stranding C, speakers create an onset with /h/.

There is also an assimilation rule which changes <u>l</u> to <u>nd</u> when it appears after a morpheme closed with a nasal.

(104)   Assimilation of <u>l</u> to a preceding nasal

```
L        H              L    H
cing + leng    ->      cingndeng        `tooth'
L        H              L    H
ming + lang    ->      mingndang        `noses'
```

This process also applies to the particle *lE L* `anymore, still, again', but not to the negative particle *le H* nor to the benefactive morpheme *-lul L*.

(105)   Other examples of <u>l</u> assimilation and non-assimilation to a preceding nasal

```
L  H        L  H
o hing [nd]E le              `He doesn't come anymore.'
he come anymore Neg
L  H        H
o hing [t]e                  `He didn't come.'
he come Neg
```

<pre>
 L   L   H   L L   H
hing + lul + o ---> hinullo   'to come (Ben)'
come   Ben   Inf
</pre>

The rule characterizing the change of the negative

particle *le H* to *te H* after nasals is one which appears

elsewhere in the language and has its source in the

disappearance of the <u>t</u> intial suffix characterizing one of

the noun classes in Kisi. In fact, the "rule" is a

historical residue (Dalby 1966:144-46). The (synchronic)

rule changes the <u>l</u> of a suffix to a <u>t</u> when the stem ends

in an <u>l</u>.

(106) Dissimilation

<pre>
l -> t / l + __ V
 L   H   L H
hOl + leng   ->   hOlteng   'eye'
 L   H   L H
pEl + lang   ->   pEltang   'eggs'
</pre>

Originally there was a noun class suffix *-tang H*. But

speakers have since reinterpreted nouns with this suffix

as belonging to the <u>la</u> class which has a suffix of *-lang*

H. The forms which have *-tang H* as suffix are now

analyzed as possessing this suffix via a rule of

dissimilation, i.e., only when a stem ends in *l*. This

dissimilation rule has been further extended to the <u>le</u>

class. It also now characterizes the change in the

negative particle after <u>all</u> consonants, not just those

ending in *l*. Because the conditioning environment is now

phonological, at least for the noun classes, the change

must be seen as a phonological rule. With respect to the

negative particle, we must have a different rule,

restricted solely to the particle.

(107) The negative particle after consonants

```
L  H  H   H
o co hOl te          'It's not an eye.'
Pro Cop eye Neg
L  H    H
o hOng te            'She didn't blow (the horn).'
```

As shown above, the negative particle changes to [te]

after all consonants. The changes that the negative

particle *le H* undergoes are limited and are considerably

different than those affecting the homophonous preposition

le H which, in similar environments, undergoes no changes.

Particles, as shown with *lE L* above, and pronouns are

the word classes most likely to undergo phonological

change. Other particles which undergo comparable

assimilatory processes are *wO L* 'yet, still', *wO L* the

politeness particle, *yE H*, a binding particle, and *yE L*,

the question particle. In all cases the first consonant

of these particles assimilates to the preceding

conconantal segment.

(108) Particle assimilation

```
H    L                 H    L
hung wO      ->   hung ndO        'Come (polite)!'
come  Prt
L   L                  L   L
lOl yE       ->   lOl lE          'sleep (question)'
sleep Q
L   L                  L     L
hing yE      ->   hing nyjE       'come (question)'
come Q
```

Some of the same processes are at work on pronouns that begin with the same consonants, *ya H* 'me', and the demonstrative pronouns *lang H* 'these, la class' and *leng H* 'this, le class'.

(109) Pronoun assimilation

<pre>
H H H   H   H H H   H
wuulul ya   ->   wuulul la   'Throw to me!'
throw me

 H   H   H   H
cum ya   ->   cum nyja   'Wait for
me!'
L R   H   F   L R   H   F
yiyangndang lang -> yiyangndang ndang   'these thoughts'
</pre>

Several generalizations emerge in a consideration of these different assimilatory processes. First of all, the process is perseveratory: the features of a preceding word-final consonant persevere onto the following glide or liquid. Secondly, there is a hierarchy to the process. Glides can become pre-nasalized stops or a lateral, while the lateral can only become the pre-nasalized alveolar stop. A segment undergoing assimilation can only become more of an obstruent, and thus the process may be interpreted as a "strengthening" one.

(110) Onset strengthening in particles and pronouns

$$/ \; 1 \; \# \; \underline{\quad} \qquad / \; N \; \# \; \underline{\quad}$$

y ->	1	nyj
w ->	1	nd[36]
1 ->	no strengthening	nd

As a strengthening process, the changes affecting

particles and pronouns are comparable to those at work

within the noun class and verb extension systems.

3.6.3 Tone rules

Lexical assignment of tone has been discussed above,

and grammatical assignment will be discussed below. There

are few other processes which do not fall into one of

these two categories.

There are a few generalizations that can be made

about tone changes on verbs due to the subject of the

verb. The high-toned subject pronoun *i H*, for example,

raises the tone on the first syllable of a following verb.

The first example in each pair illustrates the situation

with low-toned subject pronouns, here *o L* 'third person

singular', and the second example in each pair illustrates

---

[36] Note how the labialvelar glide is not realized as
either a labial or a velar nasal compound stop but rather
as an alveolar pre-nasalized stop. The absence of
phonetic motivation is probably due to the parallel in the
noun class system, where all empty onsets after a nasal
are filled by the alveolar nasal compound stop.

the situation with *i H*. The tone(s) on the first syllable

of a verb in this environment would normally be Low.

(111) Verbal tone raising caused by *i H*

```
L  LL F    H LH        H  HH F    H LH
o toonung domaa        i toonung domaa
She wash   shirt
'She washed the shirt.'   'I washed the shirt.'


L  LL HH  L  H
o ciimia hOlteng        'She rubbed (her) eye.'
she rub   eye
H  HH HH  L  H
i ciimia hOlteng        'I rubbed (my) eye.'
```

The pronoun *i H* is the only subject pronoun with a high

tone.

Other high-toned pronouns can appear in this position

(see 4.2 Pronouns), but they are what I've called "object

pronouns". These pronouns appear in all other positions

as well; the subject pronouns appear only here,

immediately before the verb. Because the subject pronouns

are more tightly bound to the verb, it may be true that it

is only they that are allowed to affect the tone of the

first syllable. No other single word (excluding phrasal

or sentential processes such as Focus) can affect the

first tone of a verb in this way, although proper names as

a class have just such an effect.

Even without a final High, names raise the first tone

of the verb when it is Low (as assigned by the grammar).

(112)   The raising of verbal tones by proper-name
         subjects

```
L    LL   HH   LH
```
o kpeengia lia   'She shook off the bees.'
she shake-off bees
```
L    L    HH   HH   LH
```
tamba kpeengia lia   'Tamba shook off the bees.'

```
L  H   H   L    H   L  LHH
```
nyuma co yOmnde kilioo
Nyuma Aux wood cut
'Nyuma is cutting (some) firewood.'
```
L   HH   HH    H  H    H     HH  H
```
do faangia nda o kpenggbeilang
Doe remove them Prep places
'Doe removed them from their positions.'

```
LL   H   L   HH   LL   HH   LHH   L    L
```
saa bEndu tiinguu laanduaa fangga
Nam Nam   pledge wives   a-lot
'Saa Bendu pledges himself to a great many wives.'

In the Perfective (all the verbs above are in the
Perfective), the first syllable of a verb is usually low-
toned, as in the first example. The first and second
examples show the effect of a proper-name subject. The
third and fourth examples show that the effect is the same
regardless of the tone of the preceding syllable. The
fifth example shows that the tone raising applies to
adjectives that have become names; *bendu* means 'large,
older'.

The example below shows that tone raising does not
extend to terms of familial address.

(113) Tone raising and terms of address

```
L  H   L  H    L  L   HH
```
kEkE celul cElEkpOO
Dad fatten child   'Dad fattened the child.'

That the subject pronoun *i H*, which is high-toned, raises
the tone of the first syllable of a low-toned verb does
not seem surprising. An account seems available through a
spreading rule of some sort with a consideration of
boundary types, as discussed above. But the reason for
proper names raising verbal tones in the same way is not
so readily apparent.

The one explanation that can be advanced proceeds
from a consideration of regular nouns being turned into
names. All nouns have a noun class suffix, which has a
high tone. When nouns are changed into proper names, for
example, as would an animal in a folk tale, the suffix is
dropped, as in the examples below.

(114) Nouns become names

H L LH	H L LH	H L L
tombosio	*tombosia*	*tombosE*
'a small	rat/s'	'Rat'
L H	L H	L
tungndo	*tungnda*	*tung*
'dog/s'		'Dog'

Perhaps it is only the segmental material that is deleted,
and the tone associated with the suffix when the noun
appears in its full form associates with the first
syllable of the verb, overriding an already associated
Low. This account is highly speculative given the nature
of tone spreading elsewhere at this boundary.

When proper names are non-subject arguments, names
with final low tones have that a raised tone. (In
citation form the name is *saa LL*.)

(115) Raising of name-final tone

```
H     L     HH L  L   LH  LL LHH
sung-sung bEE o co saa duuviaa
now         even Pro Aux Nam talk-Pl
'Even now he's talking to Saa.'
L   L L  LH  H   L LHH
o lOlu saa le nyEdiaa
Pro envy Nam for food
'He envies Saa because of (Saa's) food.'

L   LL HH    H  LH H  HH     H
o lOuvial la saa a lEEngndo
Pro strike-Pl-Ben me Nam with machete
'He struck Saa repeatedly with the cutlass for me.'
L   LL H   H  LH  LH H
o suulul la saa pOuwo
Pro rub-Ben me Nam powder
'He rubbed powder on Saa for me.'
L  R    H H  LH
o teng ya a saa
Pro cross-Ben me with Saa
'He crossed with Saa for me.'
```

The first pair of examples show sentences *Saa* as the

argument closest to the verb followed by first a Low and

then a High. In the second pair of examples, *Saa* appears

as the second argument in sequence again followed by a Low

and a High. The final sentence shows *Saa* as the object of

a preposition, retaining its High tone.

The examples below show that the same phenomenon

exists with *tamba LL*, another Low-toned name. Names with

a final High are not changed.

(116) The raising of stem-final tones on names

```
L H  L H   LH  L  H
hali cukal saa tamba
Nam  prick Nam Nam
'Hali pricked Tamba for Saa / Saa for Tamba.'
 L H  L H   L  H  LH
hali cukal tamba saa
Nam  prick Nam Nam
'Hali pricked Tamba for Saa / Saa for Tamba.'
```

Note again that the status of a name as an argument does not affect tone raising.

As the object of a preposition and the last word in the sentence, the High is variably realized.

(117) Variable realization of a High on *Saa* finally

```
L H  H H  H  H  LL
hali cuka ya le saa
Nam  prick me for Nam
'Hali pricked me for Saa.'
L  L   H   H  H  LH
o sunggul la le saa
he talk-Ben me for Nam
'He talked for me for Saa.'
```

This process does not seem to affect final names when these names are not objects of prepositions.

(118) Names as final words in sentence

```
LL   HH H    H  L  H
saa loolul nde tamba
Nam beat-Ben mother Nam
'Saa beat Tamba for mother.'
 LL  H  H   H  L  H
saa fandal la tamba
Nam give-Ben me Nam
'Saa gave [something] to Tamba for me.'
L  LL H  LH
o duuwa saa
he talk Nam
'He talked to Saa.'
 L H H    L  LL HH   H  LH
koowang ma sOOndial la saa
medicine it run-Ben me Nam
'Medicine made Saa get diarrhea (it was apparent to
me).'
```

Another piece of evidence is what happens when there is intervening material between a name and the first syllable of a following verb. In the first sentence below the suffix is -aa *HL* which means 'and __'s friends or

associates'. We see that the tone of *co* is not affected.

(The form of the name in isolation is Low-toned *tamba LL*.)

(119) When segmental material intervenes

```
L   HL  L   L LH  L   LH H   HH  R
```
tambaa co masaa bOngaa o 100 ning
Nam-Pl Aux chief meet in market in
'Tamba and others are meeting the chief in the
market.'

We have seen that a name raises the first tone of a verb only when it is next to that verb. Furthermore, this is the only segmental material, aside from that of the name itself, to which it can associate. This fact is a further argument for seeing verbs as accentual (see Childs 1988a), that is with the Low tones on the verb being non-accented rather than associated with a tone and thus more susceptible to having a tone associated with them.

In summary, then, it thus seems possible to interpret the tonal behavior of names as attributable to a floating High. This unassociated tone can attach only to the first syllable of verbs, as when names are subjects, an association possible because of the accentual nature of verbs. Otherwise the floating High must associate with the name itself, as it does in post-verbal constructions.

Chapter 4: Word classes

Bloomfield has noted that "the categories of a language ... are so pervasive that anyone who reflects upon his language at all, is sure to notice them" (Bloomfield 1933:270). Upon reflecting on Kisi, no analyst could fail to note the word categories I present below. Nonetheless, the fact that these categories exist says nothing about their structure and constituency. Some categories are more air-tight than others, and there is leakage and gradualism in many cases. If I emphasize these latter aspects of each category, it is because they are features too often glossed over (cf., e.g., Ross 1973).

The purpose of this chapter is twofold. First of all it indicates explicitly the criteria I have used to define the categories. Secondly it indicates the continuum nature of divisions between these word classes, a feature on which I focus in the section on ideophones (4.8).

The order in which I discuss Kisi word classes is given below.

4.1 Nouns
4.2 Pronouns
4.3 Numbers
4.4 Verbs
4.5 Adjectives
4.6 Adverbs
4.7 Adpositions
4.8 Ideophones

4.9 Conjunctions
4.10 Particles
4.11 Interjections

It is not my purpose to present an exhauastive listing of any one word class; the examples are illustrative except where I indicate otherwise.

4.1 Nouns

4.1.1 Criteria

The criteria that can be used to define the category of nouns can begin with traditional ones. For example, nouns can act as subjects of sentences, can be replaced by pronouns, etc. They constitute an open class in that new items are constantly created, e.g., by compounding and borrowing.

Furthermore, nouns in Kisi exhibit the morphological features of a noun class system. What this means is that in most contexts nouns can be analyzed as consisting of a stem and an affix, in the case of Kisi, usually a suffix. This suffix represents the noun's membership in one of seven noun classes, which membership determines the shape of concordial elements on adjectives and the like. I give below examples from the le and la classes.

(1) Kisi noun class morphology, demonstrative adjectives

	L H L H		
le class	ba + leng	-> baleng	'sheaf (of rice)'
	Stem NCM		
	L H L H		
la class	ba + lang	-> balang	'sheaves'

		L H F	
<u>le</u> class		*ba-leng ndeng*	'this sheaf'
		Stem-NCM Dem Adj	
		L H F	
<u>la</u> class		*ba-lang ndang*	'these sheaves'

Note how the form of the demonstrative adjective changes (*ndeng F* for the <u>le</u> class noun and *ndang* for the <u>la</u> class noun) depending on the governing noun.

I show below some examples of the way in which cardinal numbers show agreement with plural nouns. There is no agreement shown on the word for 'one', although it is prefixed by the pronoun of the head noun (see Chapter 5: Inflectional morphology, nouns).

(2) Kisi noun class morphology, cardinal 'two'

		H L H L L H H	
<u>la</u> class		*sala-lang la-tiOOng*	'two sacrifices'
		Stem-NCM NCP-Num	
		L L H L L H H	
<u>a</u> class		*nau-a a-ngiOOng*	'two cows'
		L L L H L L H H	
<u>ma</u> class		*siau-ang ma-miOOng*	'two oranges'

Agreement here is shown both by the prefixed noun class pronoun (NCP) as well as by the change at the beginning of the morpheme representing 'two'.

Any word, then, showing the sort of morphology sketched above can be considered a noun. Not only must a noun must exhibit the formal characteristics of its class (the appropriate suffix), but it must also be fully able to govern concord on dependent elements.

4.1.2 Noun-like words in other word classes

4.1.2.1 Noun-like verbs

Verbs have a non-finite verb form, called here the "infinitive", which can behave similarly to a noun. These forms are discussed more fully in Chapter 6: Inflectional morphology, verbs. A similar form is the plural of the infinitive forms.

(3) Infintives pluralized with the -lang suffix

Singular   Plural

```
  L  L H           L   LL H
yambOO           yambOOlang        'lie down'
  L  L H           L   L H
bongio           bongilang         'trip, stumble'
  L  L H           L   L H
ponyaa           ponyalang         'be spotted'
```

There is a second way to pluralize verbs, but it more properly belongs in the discussion of verbal morphology, see 6.2.4.7 Plural.

4.1.2.2 Body parts as adpositions

Another set of words, which in other environments function as nouns, here assume the role of postpositions. These nouns appear in truncated form (without noun class markers) after the object of an adpositional phrase.

(4) Body parts as adpositions

```
  L   H H   L   H H
bEnggoo  bEnggulang      'foot, leg'
L   H  L     H   H  L H  L   H
o wa kungndang o bOO bEnggu
he Aux groan   Prep bush Post
'He was groaning under the bushes'
```

The full set of nouns which can serve as postpositions are given below in the section on adpositions.

4.1.3 Names

Although names refer to the same entities as nouns, they do not participate as fully in the nominal morphology and thus must be considered a subcategory of nouns. For example, names of human beings or animals, although they govern pronouns in the third person singular or o class, do not have noun class markers suffixed to their stems as do all other nouns. A clear difference between the two can be seen when a small rat is referred to as a small rat and when it is featured as a character in a folk tale or proverb. In the first instance, the animal is called *tombosio* (pl = *tombosia*) while in the folk tale the rat is called *tombosE*, i.e., the same word without its noun class marker.

(5) Names versus nouns

```
L   L  H   L  LH
o co tombosio              'It's a small rat.'
H   H L  H  H  H   H  H   HH H   L  HH   H   HL H   L L
tombosE kela a bOlO yoole vilEi le, seuwa kelu
sm-rat  wander with bag rope long Neg, big-rat cut
'A mouse should not travel with a long-roped bag (a
beautiful woman), the big people will cut (the rope,
i.e., take the woman).'
```

The implications of this distinction for the tonology from an evolutionary perspective are discussed in Chapter 3: Phonology.

Proper names can be pluralized in a fashion; there is

a morpheme that means `and the person's people, friends, associates, or entourage'.

(6) A pluralizing morpheme for proper names, *-aa HL*

```
L  L   HL  H  HL    HH    HHH   HH    H
```
fala vaani-aa baangiaa naa ni
Nam Nam-Pl   redeem-Pl us Foc
`Fala Varney and others redeemed us.'
```
L    LL HH    H   LL  HL
```
o nyuunial la saa-aa
Pro ask-Pl me Nam-Pl
`He asked Saa and his people for me.'

Although this suffix is reminiscent of the noun class suffix for plural animates (*-a H*), it is clearly different both in terms of its tones and duration.

Thus far we have seen that names resemble nouns but are also distinctly different. These differences are even greater in other closely related languages. In Temne (a nearby language also belonging to the Southern Branch of Atlantic) names have a phonology somewhat different from that of the rest of the language in that borrowings are not nativized. Nemer calls these exceptions to the Temne phonological system "phonological stereotypes" (Nemer 1987) in that they have acquired expressive meaning. Names in Kisi are different but not quite so different as to have a separate phonology.

Kisi has a system of naming children for the order in which they were born, a custom common to the area.

> The major features of traditional naming among Mande-
> speaking groups (e.g., Mende and Kono) in Sierra
> Leone are birth-order names (that is, certain names
> are always assigned to the first son, the second son,
> and so on) and patrinyms (Innes 1966). These

features are also found among non-Mande peoples, such as the Shebro (Markwei 1966) (Sherbro is an Atlantic language like Temne).

(Nemer 1987:345-46)

Sherbro is the language most closely related to Kisi.

The birth order names are as given below, female names in the first column and male names in the second column.

(7) Birth-order names

Order	Male	Female
First	L L saa	L L sia
Second	L L tamba	L L kumba
Third	L L H L faiyaa	L L finda
Fourth	L L fala	H H H teuwa
Fifth	L H nyuma	L L H L H yauwa / yawa
Sixth	L H hali	L H tEnE
Seventh	?	H H H sOOna
Eighth	?	H H fela

If a seventh male child is born, he is named *saa-kOOli* 'Saa behind or afterwards'. One interesting feature of proper names is that they raise the tone on the first syllable of low-toned verbs (see discussion in Chapter 3: Phonology).

Other names may be based on physical features, nonce circumstances, or the role a person plays in secret society initiation rites (see Akinnaso 1980, 1981, 1982 for other motivating factors).

(8) Other Kisi names

L   H
wanggo   'name given to a light-skinned female'
L   H H
sungmgboo   'fence post' (given to a stocky man)
L L   L H   H
sEEnggiangndo   'arguing pl' (given because parents argued excessively)
L L L H
paawaa   'tax' (given because child born at time of tax collection)
H   H L
fOkpOO   'initiation name'

Names also may be taken from one's profession, e.g., *Mayson* [sic], *Sawyer*, and notable political figures, e.g., *McCarthy*, a prominent Sierra Leonean, *Pittman*, another prominent area individual; they may even be chosen for euphonic reasons, e.g., *Ogelthorpe Sylvester* (cf. discussion of Nemer's (1987) stereotyping above).

In addition to names such as these, one has a clan name, a name that denotes one's membership in a group sharing familial relationships and geographical areas, and food tabus. These names are not widely used in Liberia but are more popular in Guinea. I give below several clan names from my own elicitation work[1].

(9) Clan names

L H H   L H H
kamaa / kamara 'clan residing around Foya, Liberia'

---

[1] Massing (1982) gives the following as names of clans: <u>konianda</u>, <u>komaa</u>, <u>dufangadu</u>, <u>mamadua</u>, <u>milimua</u>, <u>gotola</u>, and <u>manlawa</u>. None of these names appeared in my own data, and the last two names seem unlikely since they violate Kisi phonological constraints.

```
L  H   L H
kOlumbaa          'group around Kissidougou, Guinea'
F   L H
tOlnOO            'member of a Guinea clan'
```

I give below several names from religion and secret society (Poro) activities.

(10) Names from religion and secret society

```
L  H  H
mElEka      'God'
H   L H
nggunyaa    'devil[2] with the long mouth'
H  HH  H
kOtueyo     'devil that stays in the bush'
```

The second name is unusual in that it has an initial nasal-compound stop ngg, a sound not occurring in this position elsewhere in the language. Since this devil is shared with the Gbandis, it is likely the name is a borrowing.

Some town names appear below.

(11) Town names

```
H H  H
fooya             'Foya, a town in Liberia'
H H H    H
kuEEndu           'Koindu, a Sierra Leone town'
H L   H  L
soombolo          'Sombolo, a town in Liberia'
```

Below I give the months of the year. There was some uncertainty as to the corresponding English months, even as to the time of the year each Kisi month name

---

2   A "devil" is an entity with many roles, primarily that of being one of the prominent individuals of the Poro (secret society). The generic name for a devil is nyE-bEndoo 'big thing'. For further discussion see, for example, Schaeffner 1964 and Dennis 1972:130ff.

represented. I have followed the format published by the Kisi Literacy Committee of Liberia.

(12) The months of the year

H H H H *tEEkpaa*	'January'
H H H *dongdongndo*	'February'
H H L / H L L *fuoo*	'March'
L L H H H H *nyaakuEiyo*	'April'
H H H L *bukuloo*	'May'
H L L / H L H *koongndo*	'June'
L H L L / L H H L L *suEsOO / suEsuOO*	'July'
L L H *naandO*	'August'
L L H *tapio*	'September'
H H *saa*	'October'
L H L L L *bEngufOnOO*	'November'
L L L L L H *bOlOObOlOO*	'December'

There are various etymologies for the names of the months. For example, 'February' is so called because it is so quiet in the towns, a 'hungry time' when no rice is being pounded (cf. *dong* 'quietly'). 'March' is so called because it is the time when cotton (cf. *fungndeng* 'cotton') seeds are floating in the air. 'May' is the mushroom season and one word for 'mushroom' is *bukuloo.* 'August' is the time when everyone is sick (*naa* 'to be sick').

The days of the week do not have so colorful etymologies. Their names are taken from the names of the

towns where weekly markets are held. These names do not
have so wide a currency since they are entirely dependent
on which towns one is near. I give, therefore, only a few
representative examples from the area near Foya, Liberia.

(13) Days of the week

L L HL *nOnggOwaa*	'Guinean city with Tuesday market'
LL L HH *kOOlumaa*	'Liberian city with Thursday market'
LH LH *ndaamaa*	'Liberian city with Saturday market'

As a last topic in our discussion of names, I make a
few remarks on animal names, which often appear without
noun class markers in folk tales and other types of
special discourse (see discussion of *tOmbosE* above). A
good number of Kisi animal names involve reduplication.
Below I list some noun stems, i.e., nouns without the noun
class suffixes, showing such reduplication.

(14) Animal names involving reduplication

H L *bubu*	'pig'
LL HH *suusuu*	'otter; wood-boring insect'
H L H L H *belangbelangndo*	'hornbill'

Animal names also involve reduplication in Lulubo (Central
Sudanic, Sudan), where names have an aberrant phonology
comparable to that of ideophones (Andersen 1987:58). This
is not true of Kisi; animal names are in no way
phonologically aberrant. The exception to this
generalization is that some animal names hint of

onomatopoeia, i.e., in imitating the sound made by the animal. I give two obvious examples below.

(15) Onomatopoeic animal names

LL LH
nyaayoo 'cat'
H H   H H   H
ngOOngngOOngndo 'bullfrog'

These names, though onomatopoeic, do not violate any phonological constraints in the language. In languages of the world animals are commonly given names according to their cries (Gonda 1940:157), and reduplication also often plays a role (Key 1965:99-100).

This cursory look at the sorts of names used by the Kisi people illustrates that names obey the phonological constraints of the rest of the language and can even be interpreted as employing the language's morphological resources, reduplication and compounding.

4.2 Pronouns

The category formed by pronouns should be fairly non-controversial, constituting a closed class of words with circumscribed functions. Pronouns replace nouns its form determined by the class to which its antecedent belongs.

4.2.1 Personal pronouns

Kisi has two different types of pronouns, one appearing only in subject (pre-verbal) position and the second in all other contexts. I will call the first group

"subject pronouns" and the second group "object pronouns". Possessive adjectives (/possessive pronouns) are discussed in the section on adjectives (4.5). I discuss the subject personal pronouns first. ·

(16) Subject personal pronouns

	Sing	Plur
Person		
1st	H *i*	L *ng*
2nd	L *a*	L *la*
3rd	L *o*	L *a*

The first person singular pronoun *i* H has the effect of raising the first low tone of a verb.

(17) Raising of verb tones by *i* H 'I'

H HH HH L H
i ciimia hOlteng   'I rubbed [my) eye.'

L LL HH L H
o ciimia hOlteng   'He rubbed [his] eye.'

The only environment in which the subject pronouns can appear is immediately preceding the verb.

Subject pronouns can also show tense and aspect, most notably in the Imperfective. A full treatment is contained in Chapter 6: Inflectional morphology, verbs.

(18) The Imperfective

Perfective
H   F
i mal   'I lost (something).'
L   H
o mal   'She lost (something).'
L   H
la mal   'You (pl) lost (something).'

<pre>   H H   L
Imperfective   ii mal   'I lost (st) but found it.'
                    H H   L
                    oo mal   'She lost (st) but found it.'
                    H H   L
                    laa mal   'You (pl) lost (st) but found it.'
</pre>

Here the vocalic part of the subject pronoun is lengthened and is assigned a high tone. The verb always has low tones throughout.

Object pronouns are featured in all other environments, and can appear in subject position as well. Here their function is to convey emphasis or contrast. When they appear in subject position, they must be used in conjunction with one of the subject pronouns.

(19) Object personal pronouns

<pre>   Sing   Plur
        Person
                    H   H H
        1st   ya   naa
                    H   L   H
        2nd   num / ng   nya
                    H   L   H
        3rd   ndu / ng   nda
</pre>

Object pronouns generally consist of greater phonetic substance, most often a nasal element, and they all have high tones.

Besides the two forms given above for the second person singular pronoun, two other forms are used in emphatic environments *numbo LH* and *nunggo LH*.

(20) Other emphatic pronouns

<pre>   L H L
        numbo hing   'Did you come?'
        L   H L
        nunggo hing   'Did you come?'
</pre>

The nasal component gives the word more prominence as would be expected if it were to be emphasized.

This situation parallels one found in Swahili where an emphatic form of the copula *ni* is *ndi*.

(21) Emphatic forms in Swahili

<u>Non-emphatic</u>   <u>Emphatic</u>

ni ninyi   ->   *ndinyi*   'It is you (pl).'
Cop you (pl)
ni hao   ->   *ndio*   'It is they.'
ni hapo   ->   *ndipo*   'It is here.'

The change of the bilabial stop into a nasal compound stop may be serving the same function (cf. prenasalized stops in Barbadian ideophones (Gilman 1986:46, FN 3) and examples of <u>nd</u> in American Pentecostal glossolalia (Samarin 1972:129, as quoted in Jakobson & Waugh 1979:213). The increase in sonority serves to make the sound more salient (see discussion of consecutive conjunction below in 4.9.1. Consecutive conjunction)[3].

The two types of pronouns can also be used together, often for emphatic or contrastive purposes.

(22) Subject and object pronouns used together

HH   L   HL
naa ng kuE
Pro-Obj Pro-Subj go
'We would go.'
H H H H HL L L HHL H
ya i co macua wana suaa le
Pro-Obj Pro-Subj Cop real person talkative Neg
'I'm not really a talkative person.'

---

[3] According to Gonda, there is some controversy over whether or not spontaneous nasalization can be seen as an expressive device, see references therein (1940:210).

The object pronoun is obligatory in focused constructions (when it is the item of focus) and need not be followed by the subject pronoun.

(23) Object pronouns in focused constructions

```
L    LL   LL   HHH
o kpeendia yuei              `She braids ropes.'
Pro-Subj braid-Pl ropes
  H  L    LL   LL   HHH
ndu o kpeendia yuei          `She braids ropes.'
Pro-Obj Pro-Subj braid-Pl ropes
  H   HH   LL   HHH   H
ndu kpeendia yuei ni         `It's she who braids ropes.'
Pro-Obj braid-Pl ropes Foc
```

The non-subject pronouns are used in all environments where nouns can be used, as arguments of verbs, objects of adpositional phrases, etc.

The subject pronoun seems to be more tightly bound to the verb than the object pronoun (see discussion of tonology in Chapter 3). There can be no intervening material betwen the subject pronoun and the verb, while other words can appear between and object pronoun and the verb.

(24) Material between the object pronoun and verb

```
H    HH      F
ya fEEng hing                'I came first.'
Pn-Obj first come
  H  H  H   LL  HL    H   L  LHH
nda pila duuviang le nyEdiaa
Pro Emph talk-Pl-Mid for food
`They talked among themselves about food.'
```

Subject pronouns can appear in no other position than that immediately preceding the verb.

4.2.2 Noun class pronouns

Noun class pronouns also have two forms. Below I give the forms for the subject and object pronouns for the seven noun classes of Kisi.

(25) Noun class subject and object pronouns

Class	Subject	Object	
o	L o	H ndu	(= 3psg Pro)
a	L a	H nda	(= 3ppl Pro)
le	L le	H leng	
la	L la	H lang	
i	L i	H ndi	
ng	L ng	H mung	
ma	L ma	H mang	

As with the personal pronouns, the object pronouns have greater phonetic substance and have high tones[4] associated with them.

The subject and object pronouns generally have the same distribution as the personal pronouns. One difference is that subject pronouns occur obligatorily after nouns not belonging to the o class. In other words, a simple noun cannot serve as a subject of a sentence; it must be followed by a subject pronoun.

---

[4] It should be remembered that the High is the "marked" tone in Kisi. See discussion in Chapter 3: Phonology.

(26) Nouns with obligatory subject pronouns

```
L    H    F    L  L H  H  L  H    L  LL LL   H H
```
mEngndang mang ma tosa mi taltang la tuusuu kpou
water   Dem-Adj NCP make Conj bridge NCP fall all

* *mEngndang mang [ɸ] tosa mi taltang tuusuu kpou*
* water   Dem-Adj   make Conj bridges fall all

In the sentence above we see that noun class pronouns (NCP), *ma L* and *la L* appear after the nouns to which they refer immediately before the verb of the clause. A sentence such as the second above without the noun class pronouns is ungrammatical. The only class that does not require a noun class pronoun before the verb is the <u>o</u> class, a class which also does not require a pronoun in other constructions.

4.2.3 <u>Demonstrative pronouns</u>

With demonstrative pronouns it is not so easy identifying a demonstrative affix.

(27) Demonstrative pronouns in Kisi

Class	Proximal 'this/these'	Distal 'that/those'
<u>o</u> class	H L *hoo*	H *kong*
<u>a</u> class	H L *haa*	H *kang*
<u>le</u> class	F *leng*	H *leng*
<u>la</u> class	F *lang*	H *lang*
<u>i</u> class	H L *hei*	H *keng*
<u>ng</u> class	F *mOng*	H *mOng*
<u>ma</u> class	F *mang*	H *mang*

Note how in four classes the only difference between the proximal and distal demonstratives is tonal, between a Fall and a High. .

Demonstrative adjectives are identical to demonstrative pronouns, and thus seem to belong more to the class of pronouns than to the class of adjectives. Demonstrative adjectives, however, can undergo phonological changes in context. A phonological rule changes l-initial stems to [nd] following nasals. In generative terms the rule could be stated as below.

(28) Nasal assimilation

l -> nd / [+nasal] + ___   [certain   morphological
                             environments][5]

In that demonstrative adjectives directly follow the noun class marker of their controlling nouns, l-initial demonstratives will necessarily undergo this change to nd. All le and la class nouns end in nasals (the NCMs for these classes being -leng and -lang) the surface forms of the demonstrative adjectives invariably begin with [nd].

(29) Surface   forms   of   proximal   demonstrative
     adjectives

L   H   F   L   H   F
lEngndeng leng -> lEngndeng ndeng `this cutlass'
Noun   Dem-Adj
L   H   F   L   H   F
lEngndang lang -> lEngndang ndang   `these cutlasses'

---

[5] See Chapter 3: Phonology for a full statement of this rule.

Nonetheless, because this process applies only with respect to the proximal demonstrative adjective, I have chosen to regard the l-initial forms as underlying.

The l-initial distal demonstrative adjectives, on the other hand, do not appear following a nasal because of the morphosyntax of the construction. The order of elements in this construction is Noun Stem (without suffixed Noun Class Marker), Noun Class Pronoun, and Distal Demonstrative Adjective.

(30) Nouns and the distal demonstrative adjective

	L H H	
o class	sO-o kong	'that fowl'
	Stem-NCP Dem (Distal)	
	L L L	
le class	pel-le leng	'that egg'
	L L L L	
ma class	lumbE-ma mang	'that palm wine'

4.2.4 Interrogative pronouns

Interrogative pronouns replace the word that is questioned and appear initially in questions. There are two types of question words, the first of which requires a question particle following the finite verb of the question.

(31) Interrogative pronouns requiring question particle

    L L H
    kuEE   'where'
    L H
    nEE   'who'

```
L H
wEE              `how much, what'
L H
yEE              `what'
```

The order of elements in Kisi questions is illustrated below.

(32) Kisi questions

```
L H   H H  H H   L H   H
vEE lEElOO dimi-yE        `What time is it?'
Int time    say-Prt
L H   L   L L   H
yEE ng tosa-yE           `What do you do?'
Int Pro do-Prt
```

In addition to the short form of these interrogative pronouns, there are long forms, formed by affixing a particle -nE H at the end of the interrogative pronouns.

(33) The long form of interrogative pronouns

```
L L H   H
kuEE-nE                  `Where (are you going)?
Int-Prt
L H   H   L   L L   H
yEE-nE ng tosa-yE        `What do you do?'
Int-Prt Pro do-Prt
```

In addition, there is an all purpose question word which does not require a particle. The meaning for this word is `where, what about'.

(34) The interrogative pronoun OO HL

```
H L   H   L
OO tamba                 `Where's Tamba?'
H L   L L   H H   H   H   H L   H
OO yelengyeleng hel num hoo wo
Int craziness    fall Pro Dem Prt
`What is this craziness that has come over you?'
```

This pronoun is also different from the first group of

interrogative pronouns in that it does not have a long form, i.e., one with the suffix *nE H* suffixed to it.

4.2.5 Conjunctions and personal pronouns

Two conjunctions combine with personal pronouns to form what seems to be a single word in some cases. In most instances the division into two morphemes is relatively straightforward. One such combination is with the consecutive marker.

(35) Subject pronouns and the consecutive conjunction[6]

Person	Sing		Plur	
1st	*mi*	'then I '	*ming*	'then we '
2nd	*ma*	etc.	*mila*	
3rd	*mbo*		*ma*	

The phonological changes are less drastic with regard to combinations of the first part of the conditional conjunction *te* ... *pE* 'if, when' with the subject pronouns.

(36) Subject pronouns and the conditional conjunction

Person	Sing		Plur	
1st	*ti*	'when I'	*teng*	'when we '
2nd	*ta*	etc.	*tela*	
3rd	*to*		*ta*	

Again, the conjunctions themselves do not count as instances of pronouns, but because of the sandhi phenomena

---

[6] The tones of this conjunction vary with tense and aspect. See Chapter 6: Inflectional morphology, verbs.

and the fact that *mi* can be inflected for tense and aspect, it seems necessary to mention them here. The conjunctions are discussed in greater detail below in 4.9 Conjunctions.

4.3 Numbers

A summary of the numbers used in counting is given below. Possibly the numbers `six' through `nine' are compounds of a morpheme meaning `five' and the lower numbers; certainly the numbers above ten can be analyzed as compounds.

(37) Numbers in Kisi

	L HH		H H L LH
`one'	*pilEE*	'eleven'	*tO-a-pilEE*
	L H		H H LH
`two'	*muung*	`twelve'	*tO-a-muung*
	L H		
`three'	*nggaa*		
	L HH H		H LH
`four'	*hiOOlu*	`twenty'	*bidiing*
	L LH H		H LH H L H
`five'	*nguEEnu*	`21'	*bidiing-a-pilE*
	R F		
`six'	*ngOmpum*		
	R HL		H H HH
`seven'	*ngOmaa*	`thirty'	*bele-yaa*
	R HH		H H HHH H
`eight'	*ngOmEu*	`forty'	*bele-hiOOlu*
	R H LHH H		
`nine'	*ngOmahiOOlu*		
	H		
`ten'	*tO*		
	L L		
`one hundred'	*kEmE*		
	L L H L H		
`101'	*kEmE-a-pilE*		
	L L H H H L L H		
`111'	*kEmE-a-tO-a-le-pilE*		
	L L H H LH H L L H		
`121'	*kEmE-a-bidiing-a-le-pilE*		

```
              L  L  H    H  LH    H   L   LH
'122'        kEmE-a-bidiing-a-le-diing
              L  L  H    H  LH    H   L   LH
'123'        kEmE-a-bidiing-a-le-yaa
              L H
'1,000'      waa
              L H  H      H
'10,000      waalang-tO
              L H  H      H  LH
'20,000      waalang-bidiing
```

```
LH  H      H  LH   H   L  LHH      H   L  LL   L  LH   H   H  LH     H     L  LH
waalang-biding-a-latiOOng-a-kEmOO-lediing-a-bidiing-a-lediing
       'thousands-20-and-two-and-100s-two-and-twenty-and-two'
                          '(22,222)'
```

There are only small differences among the words for 'two' when used with the different plural noun classes; there are fewer differences for 'three'; and no differences for 'four' (hiOOlu).

(38) The cardinal numbers 'two' and 'three'

Class	'two'	'three'
o	(singular class)	
a	ngiOOng (LHH)	yaa (LH)
le	(singular class)	
la	tiOOng (LHH)	yaa (LH)
i	ngiing (LH)	yaa (LH)
ng	muung (LH)	nggaa (LH)
ma	miOOng (LLH)	yaa (LH)

Although there are differences in the words for 'two' throughout the paradigm, only the ng class pronoun for 'three' is different from the others.

As can be seen in the examples below, the order of elements is Noun Stem + Noun Class Marker (NCM) followed

by Noun Class Pronoun (NCP) + Number. Note the alternative form without the NCM in the second example.

(39) Order of elements in number phrases

```
              H  L  H     L  LHH
la class      sala-lang la-tiOOng      'two sacrifices'
              Stem-NCM   NCP-Num
              H  L  L  LHH
              sala la-tiOOng            'two sacrifices'
              Stem NCP-Num
              H  L  H    L  LH
              sala-lang la-yaa          'three sacrifices'
```

Ordinal numbers in Kisi appear below. The process of formation for numbers above 'one' is to suffix the morpheme -ndO(O)- to the number and add the noun class ending.

(40) Ordinal numbers in Kisi

```
   H   L                   HH    H L H
   tase-                   lEEng tase-o
   'first'                 Stem  first-NCM
                           'first machete'
 HH      HH       L H    HH     HH    L H     HH     HHH H    L H
 lEEng diing-ndO-o      lEEng yaa-ndO-o   lEEng hiOOlu-ndO-o
 Stem  two-Ord-NCM      Stem three-Ord-NCM   Stem four-Ord-NCM
 'second machete'       'third machete'       'fourth machete'
```

There are also quantity words, i.e., words which denote an indefinite but plural number, working formally in much the same way as numbers.

(41) Quantity words in Kisi

```
 H  /  R
 ting                    'some, a few'
 H  L  H                 L    H   L  H
 cu la-ting              mEngndang ma-ting
 Stem NCP-some           Stem-NCM  NCP-some
 'some spoons'           'some water'
 L  R    H  HH  H
 o-ting ya cua ni        'It's some I took.'
 NCP-some I take Foc
```

Note how there are alternative forms with and without the NCM following the noun.

4.4 Verbs

Verbs in Kisi form an easily delimitable class, generally referring to an action or state. In Kisi, as in many other African languages, there are verbs which convey meanings usually expressed in English by adjectives, e.g., 'to be red', 'to be fat'. Yet, as opposed to many African languages, Kisi also has a class of adjectives as well as a productive process of forming new ones.

There are two distinctive morphological features to Kisi verbs. They are inflected for tense, aspect, and mood, using tone and segmental changes as well as periphrasis to convey the distinctions of tense, mood, and aspect. For a word to be considered a verb in Kisi, it must have these finite forms.

Some examples of the way a typical Kisi verb can be inflected for tense, mood, and aspect are given below.

(42) Some verbal inflections

	L L H	
Hortative	o *busu*	'It should bark.'
	L H L H	
Hort Neg	o *busu le*	'It should not bark.'
	L L	
Habitual	o *yam*	'It breaks.'
	L L	
Perfective	o *yem*	'It broke'
	H H L	
Imperfective	oo *yam*	'It was broken.'

	L L	
Perfective	o *beng*	'She blinked.'
	L HH H	
General Neg	o *biang le*	'She didn't blink.'

(43) Some compound constructions

	L L LL L	
Future	o *co kiOlO*	'It will bite.'
	L L LL LL	
Progressive	o *co kiOlOO*	'It is biting.'
	L H LL LL	
Past Prog	o *wa kiOlOO*	'It was biting.'
	L L F	
Past Perf	o *kel ning*	'It has bitten.'
	L H L H	
Neg Past Perf	o *kil wO le*	'It has not bitten.'

A second criterial morphological feature of all verbs is their participation in a system of verb extensions. Verb extensions are additions to verb stems which change the basic meaning of the verb. The plural extension, illustrated below, allows any argument to be pluralized, conveys repetitive action, etc. Verb extensions usually affect the number of different arguments a verb can have. For example, with respect to the benefactive extension, also shown below, an additional argument may be expressed, typically the beneficiary of the verb's action. I give all verbs in their infinite forms, first the base form, then two extended forms, then a form featuring a combination of the two extensions.

(44) Some verb extensions

	L LH	
<u>Base</u>	*pElaa*	'to belch, grunt, pant, start'

	LL LH	
<u>Plural</u>	*pEElia*	'to belch many times'

             L L   H
<u>Benef</u>   *pElallo*   'to belch for or towards someone'
             LL LL   H
<u>Benef pl</u> *pEEliallo*   'to belch multiply for someone'

There are four extensions in Kisi, not all combinations of which are allowed. Only a few verbs do not allow extensions.

The syntax of Kisi verbs is relatively straightforward. Verbs are the only words that can appear immediately after subject pronouns.

There are few phonotactic constraints on what a verb[7] may be in Kisi. The typical verb consists of one syllable, yet there are verbs consisting of both two and three syllables.

(45) Stem forms of Kisi verbs

kO   *'go'*
bou   *'peel'*
del   *'fall'*
sEm   *'chew'*

cimbu   *'leave secretly'*
kala   *'love'*

fasanga   *'throw on the ground'*
kindila   *'press, squeeze'*

There are no restrictions on what a monosyllabic verb may be. The final syllable of polysyllabic verbs is always open, and three syllable verbs all end in the low central vowel /a/. Monosyllabic verbs comprise over half the

---

[7] *These remarks refer to <u>non</u>-extended forms only. The addition of a verb extension alters both the number of syllables and final segment of a verb.*

total number of verbs, bisyllabic comprise over a quarter, and trisyllabic the remainder.

4.4.1 Auxiliary verbs

The forms *co* and *wa* function as auxiliaries in the Progressive and Future in Kisi. The former is used in the Present Progressive and Future and in the construction which negates both.

(46) Uses of the auxiliary *co*

```
                 L  H    H  H H   HH R
Fut              o co ndu kona doonOng
                 he Aux him message pour-forth
                 'He will relate the message to him.'
                 L  L  LL HL    HH L  L  L LL  H
                 ng co ciikiang 1OO ng co hunOO wo
                 we Aux meet-pl time you Aux come Prt
                 'We will see you when you come.'
                 L  L  H  L H   H  L  LH
Prog             tamba co kOlang a bongio
                 Nam  Aux go   with stubbing-toe
                 'Tamba is going along stubbing his toe.'
                 LL  H   H  L   H   LL L  H
                 saa co ndu tamba loolullo
                 Nam Aux her Nam beat-Ben
                 'Saa is beating Tamba for her.'
                 H H  H  H L   H
Neg              kE i co sOla le
                 but I Aux get Neg
                 But I won't get it.'
                 L  H  H    L  H   H L  L LHH   H
                 o co cang ndO le nda co solioo le
                 it Cop crying his Neg they Aux taking-out Neg
                 'They are not having his death feast.'
```

The auxiliary *co* is restricted to non-embedded clauses except when the truth of the embedded clause is well established as, for example, when speech is reported.

(47) *co* in embedded clauses

```
L   L H  LL  H H  H  L L R      H H
o dimi maa ya i co fEfElang fuu
```
he say that I I Aux stay   Idph
'He says I'm staying futilely.'
```
H  H  H   H  LL H  H  H  H   H H  H H
sina pEnggu maa i co wallo kpeekpei
```
know Idph that I Aux work Ideophone
'Know that I'm working hard!'[8]

In other environments *wa* is the auxiliary used.

One function of the auxiliary *wa* is as part of the

Past Progressive (affirmative) and its negation.

(48) Past Progressive use of the auxiliary *wa*

```
L L  H  L  H     L R   H  F  H  L   H  L H
fala wa kiltang, cunOngndo cu, mi cingnde fula
```
Nam Aux run   fall-down Idph Consec tooth come-out
'Fala was running, fell down hard, and his tooth popped
out.'
```
H  H  LLL LH  F  F  H  H  H H   F  H  LHH  H  H
i wa tueiyOO wO wO kE, i sina nyE wa suEi yo le
```
Pro Aux hear Idph but Pro know thing Aux speak Prt Neg
'I was hearing the falling sound but I did not know the
thing that was making the noise.'

The Past Progressive auxiliary in its negated form is *we*.

---

[8] There is the apparent exception given below, a
formulaic expression used for wishing someone good health.
(The pronoun *ma* represents the word *youmang* 'breath'.)

```
H  HH L    LL  L  L  L  L LH  L  L  LL  L   H  L
i laalang maa ma co wO fulaa mi ma miinggu, numbO?
```
I believe that it Aux still appear Con it return, not so?
'I believe that you're still breathing, right?'

The expression means something like, 'I hope you're all
right.' If there were some doubt as to whether or not the
breathing were taking place (if *wa* were used), the
sentence might be interpreted as wishing the person ill
health. In other sentences *laalang* has a meaning of
sincere belief and surety.

(49) The auxiliary *wa* negated

```
L   L  H   H    H   H L  H
```
tamba we walli tosa le   'Tamba was not working.'
Nam Aux work do Neg
```
L   H  HL  H
```
o we yau le   'He wasn't cooking.'
Pro Aux cook Neg

The auxiliary *wa* appears in all subordinate clauses,
except after *maa* when the verity of the embedded sentence
is established.

(50) Other uses of *wa* as an auxiliary

```
H  H   H   H  HL  L  L   HHL  H   H  H   H  L    L
```
ya i co macua wana suaa le, kE i wa minggi
me I Cop really person talkative Neg, but I would repay
'I'm not a talkative person, but I would pay back.'
```
L   L   HH  F  HH   LL   HHH  LH  H   L  LH   H
```
te num oo ce naa hau siEElia o pembei pE,
if you Imperf see us today slipping on hill if,
'If you had seen us slipping on the hill today,
```
H   H   L  LL   LH  H   H
```
a wa mamOO maa sangga
you would laugh then-you be-tired
you would have laughed [until] you tired [of laughing].'

(51) The auxiliary *wa* in subordinate clauses

```
H  H   L   H   H    L  L   L   L  LL  H   H  L   L   R
```
bOlO ng ve kOl ma o co komOO le wo o komnung
'The banana that you didn't think would bear bore.'
```
L   H  H   H   H  LL  LH  H   H   HH  HH
```
te a wa ya lauwOO pE, a tuusuu
'When you are plaiting my hair, carry it down.'

A further use of the auxiliary *wa* is in forming the Future
Progressive in conjunction with the auxiliary *co*.

(52) The Future Progressive

```
LL   H   L  L  L  H
```
saa co wa isisi
Nam Aux Aux stand
'Saa will be standing.'

```
H   H   L   LL    L   L   H     L    H
i  co  wa  diomnde  numndeng  cumndo
I  Aux Aux word    your      wait
```
'I will be waiting for your word.'

These two auxiliary verbs *co* and *wa* are formally identical to the forms used as copula.

4.4.2 Incipient auxiliary verbs

In this category are verbs which function both as regular verbs and as auxiliary verbs. When they function as auxiliary verbs they cause the same inversion of object and verb as occurs with Aux-Verb constructions, that is, non-subject arguments appear between the Aux and the Verb. Their function may eventually be to signal aspectual or modal contrasts. For auxiliaries to come from verbs is a well attested process. For example, in Chinese perfective *-le* comes from a verb which has a reflex in synchronic *liao* 'to finish'; experiential *-guo* is from a verb meaaning 'to pass by' (L. Anderson 1982:239).

One Kisi example is the verb *ciiyo* 'to finish'.

(53) The verb *ciiyo* as an incipient auxiliary

```
L   LH  L    H   L LL   HHH
o  cii  yOmnde  lomOO  muEEng
he finish wood burn  Idph
```
'He finished burning the wood completely.'
```
L   LH  H   L     H     L L
o  cii  fondangndang  hEvi
he finish spaces    occupy
```
'He occupied the spaces.'

The verb *cii* is in the same position as would be the auxiliaries *co* and *wa;* the objects *yOmnde* and

fondangndang precede the verbs *lomOO* and *hEvi*. It is also notable that the latter verb is in its truncated form, i.e., without its infinitivizing suffix *-o*. Such a change from a verb to an auxiliary is also common in African languages, particularly with regard to a verb meaning 'finish' (Heine & Reh 1984:38). A "desemanticized" 'finish' is commonly reduced to an aspect marker, e.g., *-isha* in Swahili, *feni* in Liberian English, < English 'finish' (Singler 1986).

As is not uncommon (cf. English and Swahili), the verb 'have' often develops into a modal auxiliary expressing obligation on the part of the subject.

(54) The verb 'have' as an incipient modal auxiliary

```
LL L H      F    H  H  L L   H H H  LL H   H
taanilang ndang la nO wana suEi cuuwo ni
bonds      these Pro have people palaver bring Foc
'It is these bonds that bring trouble to people.'
H  L LL H      F    R    H  L   H  L  L  H  H
o kolOOlang ndang ning nda nO nya yOngullo ni
Prep drinking-Pl this Post Pro have you-Pl harm Foc
'Your involvement in drinking means they will harm you.'
H  H H  F    F  L  H  H H    LL L  L  H  L LH
i sina ning ndi pEnggu walang maa a nO le hunOO
I know now  it  time   Idph   that you have for come
'I know it already clearly that you have to come.'
L  L   L  LL HHH   L H  H H   H
o nO mbo tEEsiaa nyE o dimi wo
he have Conj-Pro unravel thing he say Prt
'He has to explain what he said.'
```

In each example the meaning is that the subject ought to or will do something. The first two examples show how it is used with the Focus particle *ni*, and the last two show it used with the conjunctions *mi* and *le* to introduce embedded clauses.

Besides the frequently found example of `go' *kOlang*
used for Future, other examples of verbs that could
become part of the TAM (tense, aspect, and mood) system of
Kisi are given below.

(55) Other potential markers of TAM

L L L   L H
hiouwOO   `pass (by)'   Continuative aspect?
L L   H H   H H   H   H H L   H   L L L   L H
saa cua lEEngndo yaau mbo hiau kOlang
nam grab machete Idph Consec-3ps pass going
`Saa snatched the cutlass and passed going.'
L LH
hunOO   `come'   Future tense?
L   L   L LL   H H H   L L LL
o co hunOO cioong toofia
he Aux come towns inspect-Pl
`He will come inspect the towns.'

Although none of these words has yet assumed the status of
an auxiliary, it seems possible that some of them
eventually could.

4.4.3   The copula: *co* and *wa*

The words *co* and *wa* serve both as copula and
auxiliary.   As copula these "semantically `empty'
linker[s]" (Hock 1986:331) serve to link a subject noun
phrase with a predicate noun phrase or adjective.   They
are also used in locative and expletive constructions (cf.
Rude 1978 for a list of the functions performed cross-
linguistically by the copula).

(56) The copula *co*

L L   H   L L H
saa co masaa   `Saa is a chief.'
Nam Cop chief

```
L    H   L  L  L   L L  HH
mEngndang ma co ma nyulu kue
water    Pro Cop Pro cold Idph
'The water is COLD.'
L  H  F F   H    F   H  H  F   HH  L  H  H
o co welangndang ndang le la hing naa hOlla le
it Cop differences these Neg Pro come us face Neg
'It's not these resemblances that make us confused.'
 LL H  H    L  L  H L H
keekulang la co hOlObi
pass-Pl   Pro Cop a-lot
'There are many passageways.'
 HH H  LH HH  L  L LH  LL L
saabandiinOO co masaa kOOli
bag-carrier Cop chief behind
'The chief's bag carrier is behind the chief.'
```

The copula is negated with a change of tone, from a Low to

a High, and the addition of a clause final *le*.

(57) Negation of copula *co*

```
L  H  H  HH  L  H
o co i boosu le
it Cop NCP musical-instrument Neg
'It's not a musical instrument.'
 L  H  HHL  L  L  LH   H
ma co siau ma kendiang le
they Cop orange they pick-Mid-Adj Neg
'They are not oranges that can be picked.'
```

The past version of *co* is *wa*.

(58) The past copula *wa*

```
LL  H   L LH
saa wa masaa          'Saa was a chief.'
Nam Cop chief
L  H  HH  LL L
o wa naa kOOli
he Cop us behind       'He was behind us.'
```

As with the auxiliary *wa* (and many other verbs with *a* as a

stem vowel), the copula is negated as *we* .

(59) Negation of *wa* with *we*

```
HL  H  H   HH  H  H
haa we a kpoosi le         'These weren't lizards.'
these Cop NCP lizards Neg
```

```
L L  H   H H  H H  HL  H
```
te o we kpasu le i bii le
Cond it Cop big Neg I hold Neg
'If it is not big, I cannot hold it.'
```
L  R    HH  L  L LH  H H  LHH  L   L H L  L L L      H
```
a yOng bEE mi masaa ve o suEi hOlndO le, i dimulung ndu
it occur even Conj chief Cop for case face-his Neg, it speak-Ben-Mid him
'Even if the chief is not present for a case, it can be discussed with him.'

The distribution of *co* and *wa* parallels that of the auxiliaries, and is not a simple Present/Past distinction. The copula *co* is restricted to present, factual occurrences, while *wa* serves in all others: not only past, but also habitual, future, hortative, hypothetical, etc., something like an irrealis marker (see Singler 1986).

(60) Other uses of the copula *wa*

```
LL LL H    L  L  HH H  L  F    H
```
bOOluulang la wa bOO o bOngangndang
noise-Pl Pro Cop a-lot Prep conference-Pl
'There is (typically) a lot of noise at conferences.'
```
H LH H  L  HH  H H  H H  L  H  H L  L L  H
```
sukEiyo wa bOO nimi-nimi, o co watu-watu le
sugar Cop very sweet   it Cop sour Neg
'Sugar is usually very sweet, it is not sour.'
```
L  L   H  H  H
```
panda mbo wa ndu
maybe Conj-3ps Cop him
'Maybe he's the one.'
```
L  H  H  H  F
```
o wa lende ning
it Cop thus now
'Let it be so now.'

It also appears after subordinating conjunctions and in relative clauses.

(61) *wa* in subordinate clauses

```
LL LHH  H  L LH  H  L  LL H  H L  L H HH
```
loolioo nO tosaa ni mi nEiyo wa o culukEi
mud   have make Foc Conj road Cop NCP slippery
'It's the mud that makes the road slippery.'

```
H  H  H   HLL L   LL R       H  H H  L   H  L  H       H
```
i kendi siauma diuwang, ma wa o yOmndo bolleng ndang
I pick orange ripe   Pro Cop Prep tree head NCM
'I picked the ripe oranges which were at the top of the tree.'

```
L L  H  H  L  LL F    LL  H  H  H  H  LL  L  L   H  L
```
te o wa pE mi kaalang waa lende wa nya tEEng o nang fangga
Cond it Cop Cond Conj love type thus Cop you-Pl between it be-good much
'If that kind of love exists between you, it can be very good.'

Wa is also used for the Future with *co* as an auxiliary.

(62) Future copula with *wa*

```
L  L  L  H  L  F    H  H   H H
```
a co wa o bOngangndo nangndee
you Aux Cop Prep meeting this-year
'Will you be at the meeting this year?'

```
L  L  H  H  L
```
o co wa fondo
it Aux Cop empty
'It will be empty.'

```
LLL LL H    L  L  L  H  H
```
hiouwOOlang la co wa yE-yE
pass-Pl   Pro Aux Cop different
'There will be different performances.'

As has been shown, *co* is used as a copula in only a very few environments and *wa* is found in all others.

4.4.4 Focus particle *ni*

When the focus particle *ni* is used at the end of a clause, it focuses attention on a constituent that is fronted to the beginning of the clause.

(63) Focusing on different constituents

```
L L  H
```
saa ni   'Is it Saa Emph?'
Nam Foc

```
L  R   H  H  F   H
```
tandang ma co mang ni   'This is pubic hair.'
pubic-hair it Cop Dem Foc

```
L    R     H  HH   H
o-ting ya cua ni                    'It's some I took.'
NCP-some I take Foc
H  LL HH    R   H  H   HHL   H
o tuiliang ning o sim nuaa ni
Prep urine Post he stand thus Foc
'It's in the urine he's standing.'
```

In the first example the focus is on the only other word in the sentence. In the next two the focus is on noun phrase constituents. In the second example the subject receives focus; in the third the object of the verb. In the last example a prepositional phrase is fronted and receives focus.

In the example below we see two separate instances of focus. In the first clause the focus is on the object *kakaa* 'stinginess', and in the second on *nyE kong* 'that thing', which refers to the entire preceding clause, the reason why no one wants to work for Tamba.

(64) More sentences with *ni*

```
H  HH   L   L   H  HH   H
kakaa tamba nO tei ni,
stinginess Nam have much Foc,
'Tamba is incredibly stingy,
L    L    L H  H H   HL    H H   L  H   H
nyE kong wana-wali viu ndu o ba le ni
thing Dem laborers stay him to hand Neg Foc
[and] that is why no one stays working with him.'
```

When the item of focus is the verb, the verb is left behind as a copy of the verb is fronted. It is not an exact copy of the verb form that is fronted but rather the infinitive.

(65) Verb focus with *ni*

L H   H   H HH   H
puEngndang ya puEng ni
forgetting I forget Foc
'I just forgot.'
LL H H HH   D   H
youwo ya you ndu ni
lending I lend him Foc
'It's lending I did to him.'
L LH H   H H H   H H L   H
kpuwaa o kpuwa ya ndu o ba ni
grabbing he grab me it Prep hand Foc
'It's grabbing he did to me.'

Note how the fronted form is in its infinitive form (with

infinitive suffix, respectively, *-ndang*, *-wo*, *-a*) as

opposed to the finite form (without the suffix) appearing

later in each sentence.

The focus particle *ni* can be used in conjunction with

the copula *co*.

(66) *Ni* used with the copula *co*

L   L HH   H H HH   H L HH   H H
tamba bEE kpa co bEE wana wOOngndo ni
Nam   even Idph Cop even person bad Foc
'Even Tamba himself is a bad person.'
L H H   H   H H   H   H   LH H HL   H
doma ya ke ndu wo, sangsi ndOO co hoo ni
shirt I give him Prt, replacement its Cop Dem Foc
'The shirt I gave to him, this is its replacement.'

4.4.5 The negative particle le

The negative particle *le* and changes in the (finite)

verb (see Chapter 6: Inflectional morphology, verbs)

combine to show negation.

(67) Negation with *le*

```
LH H   H  LL  L  LH  L  R    HH  H
```
keilang a nEi yondoo la ning tau le
pass-Pl Prep road forest Pro good very Neg
'It is not very good to pass by the forest path.'
```
L  L H H  LH  H  H H  H
```
o taselandOO, i sina le
Prep first-time I know Neg
'At the beginning, I didn't know.'

Besides the phonologically conditioned allomorph *te*, which appears when a preceding word ends with a consonant (see Chapter 3: Phonology), the negative particle has an allomorph of *lo*.

(68) The allomorph *lo*

```
L  H  L  H LL  H
```
o ve la mamOO lo
it Neg NCP laughing Neg
'It was not a laughing matter.'
```
 LH   HL L  HH  H
```
cwaa bEE o kEE lo
girl even she refuse Neg
'The girl didn't refuse.'

The conditioning factors for this allomorph are not clear. Speakers remark that sentences are more emphatic with the *lo* variant. (See discussion of particle *o* in 4.10 Particles.)

The negated clause does not necessarily have to be the last clause in a sentence.

(69) Clauses following negated clauses

```
L  H  H H  LL  HH  H LL  H  L  L
```
i co lE a boondii vilEi le ma hing
it Cop still Prep period long Neg Consec-2ps come
'It is not a long time again for you to come.'
```
H  H  H  H HL  L L  HHL  H  H H  H  L   L
```
ya i co macua wana suaa le, kE i wa minggi
me I Cop at-all person talk Neg, but I Aux return
'I'm not a talkative person, but I would retaliate.'

4.5 Adjectives

Adjectives are an easily defined class consisting of words attributive in meaning and showing agreement with nouns they modify.

(70) Adjectives after nouns

```
L   L HH  H              L    L    L HH  H
lam lolEi-yo            lam-nda   lolEi-lang
Stem Adj-NCM⁹           Stem-NCP  Adj-NCM
`bitter soup (sg)'      `bitter soup (pl)'
L L  H  HH HH  H
kpele-la nOOlEi-lang                    `dirty bed'
Stem-NCP Adj-NCM
H  L L  L HH  H
finya-a sakEi-ya                        `bent fathers'


L  L  H  L
bEndu-bEndu                             `very big'
L    L  L  L H  L  H
mEng-nde bEndubEndu-leng   `a very big drop of water'
Noun-NCP Adj-NCM
L    L  L  L  H L H
mEng-ma bEndubEndu-ang  `a very big quantity of water'
L LL  L  L H  LHH
kelEi bEndubEnduei         `a very big ring'
L L   L  L H  R
kelang bEndubEndong         `very big rings'
```

The first sub-group of words that can be regarded as adjectives are adjectives (formally) unrelated to verbs.

4.5.1 Underived adjectives

This set of adjectives forms a rather limited and perhaps closed class. In many African languages there is

---

⁹ It will be remembered that o class nouns do not follow the regular patterns of noun class morphology. In this particular instance o class nouns do not suffix their noun class pronoun when modified by an adjective.

usually only a small class of adjectives. Semantically they denote the most common features, a few dimensional, quantitative, or configurational characteristics, such as `big', `long', `small', `a few, some'; a few colors, `black', `white', `red'[10]; and some other everyday characteristics, `old', `young', `new'.

(71) Underived adjectives

```
H    L
humbu-                    `white'
L   LL HH   L L   H   H   L   H      F      F
o kOOsia kOla-la humbu-lang ndang tu
he stain-Pl cloth-NCP white-NCM Dem all
`He caused the rust to stain all the white cloth.'
```

```
L  LL
sEnEi-                    `new, fresh, next'
L  L  H   L   H    H   L  H   HH   L   L   L   LL   L  LL  H
mElEka manda nya lapi haa mi la ce wOsi sEnEiyo
God safekeep you carefully Idph Conj you see year new
`May God mind you carefully until you see the new year.'
```

In addition, there are a number of adverbs that can also function as adjectives. They are discussed in 4.6 Adverbs.

4.5.2 Derived adjectives

These adjectives are related to verbs by a productive process described fully in Chapter 7: Derivational morphology. I give some examples of verbs with their corresponding adjectives below.

---

[10] See Berlin and Kay (1969) for some implicational universals regarding color terms (which Kisi obeys), and Kay and McDaniel (1978) for the linguistic significance of color terms.

(72) Verbs and dervived adjectives

Verb	Adjective	Gloss
linda	*lindei*	'muddy, mixed'
tambu	*tambEi*	'broken, wrecked'
lol	*lolei*	'bitter'
sE	*sioowEi*	'rotten'

An example of the difference in morphosyntax between verbs and derived adjectives is given below.

(73) Verbs and derived adjectives in sentences

<u>As Verb</u>   L HH L   H L L H H LH
o seenung te, o culuka bOO
it hold-Mid Neg, it slippery very
'It cannot be held, it is very slippery.'

<u>As Adj</u>   L HH L   H L L LH H H H HH
o seenung te, .o co bOO o culukEi
it hold-Mid Neg, it Cop very NCM slippery-Adj
'It cannot be held, it is very slippery.'

Verbs readily form adjectives from both their Base and Middle forms (verbs with the Middle extension), the basic meaning being something like, 'achieved state' for the Base form, and 'capable of being -ed' for the Middle. A typical example is given below.

(74) Derived adjectives

LL H
yauwo   'to cook'   (Stem = *yau*)
LL L
yauwa-   'cooking, used for cooking'
L LL H   H L LL LH F H F H
o deembul la cu yauwaa lakpo-lakpo
he lick-Ben me spoon cooking Idph
'He licked the cooking spoon for me thoroughly.'
LL R
yauwang   'cooking itself, cookable, cooked'
L L LL R   H
mOmO yauwangndo   'a type of rice crust'

On the periphery of this category are ideophones or

ideophone-like words. Some of them differ little from adjectives (see also 4.8 Ideophones).

(75) Adjective-like ideophones

```
+H    H   H    H+
yengge-yengge          'describes something delicately
                        or precariously balanced'
H  H   L   LL H    +H    H   H    H+
tosa yangOOleng yengge-yengge!
do   traps          Idph
'Set the traps carefully!'
L    H   L  +H    H   H    H+         L    H    H   H    H  H
yOmndo co yengge-yengge              yOm yengge-yengge-o
tree   Cop balanced                  Stem Adj-NCM
'The tree is balanced.'              'balanced tree'
```

In the first sentence the word clearly functions as an ideophone, in the second is status is somewhat ambiguous as to whether it is an adjective (or even a verb), and in the third it is clearly an adjective. The tones are ideophone-like in the first and second constructions, and the syntax is adjective-like in the second and third. I give an example of another ambiguous case below.

(76) Ambiguous cases of adjectives

```
H      L       L       F
yangmgbang / yangmgbang          'wide or open'
L   LH  L   H   F    L   R    H  F    F   H   R    H
sondoo co ndu ning yOngnOngndo yangmgbang a cangndo
mouth Cop him now   become        wide       with crying
'The [his] mouth is becoming wider through crying.'
LL  H   L  LH   H  LH   HL  H       R
saa sOndu bOO domaa hoo yangmgbang
Nam sew  very shirt this wide
'Saa sewed this shirt [so that it was] extremely
wide.'
L   L  L      F    H  H   H  L LH  H
lEmbE yangmgbangndo co ndu lekOO ni
pants wide               Cop him behind Foc
It's the wide trousers that are on him.'
L   H   H   LH   L  LH   H  L  LH   F       F
lEmbE co saa lekOO wo o bOO yangmgbang
pants Cop Nam behind Prt Pro very wide
```

'The trousers that are on Saa are very loose.'

In the first two sentences the word for 'wide' has the features of an ideophone, in the third and fourth an adjective. The point of the above discussion is that although we have some criterial features that can define the category, there is some leakage from one category into another.

4.6 Adverbs

Adverbs form a relatively small class of words in Kisi, a class which is most easily defined negatively. One criterial feature is that adverbs lack the morphology of nouns (and pronouns), verbs, and adjectives[11]. There are few restrictions on adverbs syntactically, although they are usually found after the verb. Semantically adverbs typically denote the location, time, or quantity and thus can be said to modify the predicate. Although a few adverbs of manner exist, the function of indicating how something was done is performed primarily by ideophones (see 4.8 Ideophones below). There are also cases where adverbs fill the slot normally occupied by adjectives as, for example, after the copula.

(77) "Adverbs" in an adjective slot

```
L  LL  H      L   L   F      LH   HH  HL
biyOOlang la co ning bOO vaalio
seize-Pl NCP Cop now a-lot this-time
'There are many seizures at this time.'
LL  H  H      L   L   H  L  H
keekulang la co hOlObi
pass-Pl NCP Cop many
'There are many passageways.'
```

---

[11] Adverbs do have some morphology; they can be reduplicated.

Both *bOO* and *hOlObi* are used elsewhere as adverbs.

(78) *bOO* **HL** and *hOlObi* **HLH** as adverbs

```
L    L    LH    F
o  co  bOO  ku
'He's quite squat.'
L    LL  F      H  L  H
o  boolung  hOlObi
'He's injured plentifully.'
```

The same phenomenon is found in related languages, e.g.,

Diola-Fogny/Kujamutay (Sapir 1965:99).

Typical locative adverbs are given below.

(79) Locative adverbs

```
H  H
fElEng         'in front, ahead'
L  H
inE            'somewhere, anywhere'
H    H
landang        'far, far off'
```

(See below a brief discussion of noun stems used as

locatives.)

Adverbs that indicate the time of an event are given

below.

(80) Temporal adverbs

```
H          H H        H
fEng  /  fEEng  /  fOng      'first, already, before'[12]
HHH
ciEi                         'yesterday'
H  L
cuke                         'quickly, for a short time'
L      H
langga                       'recently, now'
```

---

[12]   It is likely this time adverb is related to the locative **fElEng** 'in front, ahead'. The relationship of temporal adverbs to locative adverbs is well established (see Clark 1973).

A relatively small set of adverbs denotes quantity or the extent to which something has taken place or is true.

(81) Adverbs denoting quantity

H HH *kinEi*	`exactly, just, all'
H *fo*	`a lot, very much'
H H *cobe*	`a short time, a little'[13]
H L H L *bute(-bute)*	`much, a lot'

Some of these meanings are close to the next type of adverbial modification, intensity or emphasis.

(82) Adverbs of intensity or emphasis

H H *ko(ni)*	`just, only, indeed, alone'
H HH *fulii*	`really, actually, truly'
L LLL *macuaa*	`really'
HL L *daama*	`only, sole'

H H L H H L
i pulu ya pila   `I washed myself.'
I wash me Emph

H H   LL LH   L   HH   HH   H   H
lelang maa paa, num bEE piOl le ya
therefore then Bone, you indeed break for me
`Therefore Bone, you yourself should break for me.'

In other African languages, e.g., Gbeya (Samarin 1970:165-66), words with these semantic elements function no differently than ideophones and are therefore included in the ideophone class. In Kisi they seem significantly different in terms of phonology, semantics, and syntax (see discussion in 4.8 Ideophones below).

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[13] Although the quantity aspect sems more basic, this pronoun might equally as well be placed in the "temporal" listing.

There are also a few adverbs of manner.

(83) Adverbs of manner

H H
cO-cO   'fast, easily, immediately, right away'
L H
lapi   'carefully, properly, rightly, well'

The difference between these words and ideophones is in terms of specificity or concreteness of meaning. Ideophones are specific while adverbs are not; this difference will be expanded on in the discussion of ideophones below.

There are several exceptions to the generalization that adverbs form a closed class. Noun-Adj combinations, where *nyE* 'thing' is the noun, often function as adverbs indicating how something was done, i.e., as adverbs of manner[14] or when something was done.

(84) Noun-Adj combinations as adverbs

L L L
nyE-binggi   'shortly, soon, in a short while'
thing-short
L L HL
nyE-kEndEi   'well, thoroughly'
thing-good
L L H H L H F L L HL
o dindul la nyElang ndang nyE-kEndEi
Pro clean me clothes those well
'She thoroughly cleaned those clothes for me.'
L HL H H H H L L HL H H L LH L H
fayia tosa wallo nyE-kEndEi nEngi masaa kOl ni
Nam do work thing-good good-Cs chief heart Foc
'[That] Fayia did the job well pleased the chief.'

---

[14]   Most such combinations continue to function as nouns. For example, the word for 'devil', a being important in the Poro or secret socety is <u>nyE-bEndu-o</u> 'thing-big-NCM'.

Another exception to the claim that adverbs form a closed

class comes from nouns used as locative adverbs. We have

seen above that noun stems can be used as the second half

of circum-positions (see 4.1.2.2 Body parts as adpositions

and 4.7 Adpositions); similarly they can also be used as

locative adverbs (full exemplification can be seen in

Chapter 7: Derivational morphology).

(85) Nouns as locative adverbs

    H   L
kOnde   'up country, in the countryside'
Cf. *kondio HLH* 'the part of the country away from the
             metropolis'
    L L
kOO   'in back, behind, outside'
Cf. *kOO LH* 'back (body part)'

These exceptions are few and the true generalization is

that adverbs constitute a small, restricted class.

4.7 Adpositions

Kisi has prepositions, postpositions, and circumpositions.

Prepositions precede the noun they govern (their object)

and are relatively few in number.

(86) Prepositions

  L   H HL L HH LL H L L   H
yOmndo hoo o buumbiang a ngcing te
tree this Pro scrape Prep teeth Neg
'This tree cannot be scraped with the teeth.'
L LL F H L H F
o kaafang o yOmndo peng
Pro tie-Mid Prep tree Idph
'It was fastened to the tree tightly.'

Circumpositions usually take the form of the general

preposition *o* `at, to, in, etc'` followed by a more specific locative Postposition after the object.

(87) Circumpositions

```
LL LL H     H  L  LLL H  L  F     H    LH  H
bOOluulang ko ng tuEi o bOngangndang coo ni
noise-Pl only you here Prep meetings Post Foc
```
`It's only noise that you hear at meetings.'`
Cf. *coo* `up, above, high'; *o* `on, at, in, etc.'`
```
L    LL H    H  R  H H  L  H H  LL L
o kpeengal ya sallo o panggaa kOOli
Pro remove-Ben me trash Prep kitchen Post
```
`He put the garbage behind the farm kitchen for me.'`
Cf. *kOO* `back'`.
```
L  LL H    H H  LL  H  H  L  LH
o fuulul ya o saa lo le domaa
Pro come-Ben me Prep Saa Post Prep shirt
```
`He approached Saa for a shirt for me.'`

A subset of the postpositions consists of body parts, as mentioned above, representing a location. The body parts that are used locatively in Kisi include: *benggu* `foot'`, *kOO* `back'`, and *ba* `hand'`.

Gilman calls these "rankshifted NP's" and states that they are found throughout Africa and in pidgins and creoles originating there (Gilman 1986:42). (One might also remark that they are found throughout languages of the world, e.g., the well-known use of body parts for features of a mountain by mountain climbers.)

Other words serving as sources for adpositions are *danggala* `side (not of one's body)'` and possible the verbs *tang* `cross'` and a verb *balu* `surround, go around'`.

(88) Other circumpositions

```
L   L H  LL H  H   H H
o co o neiyo danggala
Pro Aux Prep road Post
```

'She's by the side of the road.'
```
L   LL F    H  L   H  LL
```
o haunung o yOmnde tEEng
Pro stick-Mid Prep tree Post
'It got stuck in the tree.'

Postpositions, on the other hand, seem to be circumpositions without the general purpose pivot preposition *o H* or locative adverbs.

(89) Postpositions

```
L   L  LL R      L H  H  F      H L  LH   H
```
o co cOOlOng, te a fangang ndu ikEi pE
Pro Aux tip Conj Pro move him beside Conj
'He'll tip himself if you move away from him.'
```
L   L  H   L  H  HH  LL   H  LL
```
tamba kO mbo kO bEEndia nda tEEng
Nam   go Conj-3ps go harmonize them Post
'Let Tamba go and settle (the matter) between them.'

Admittedly the difference between a postposition and a locative adverb is slight. In the analysis presented here it is only those words that function within the circumpositional construction that will be considered postpositions.

From a diachronic perspective postpositions (and thus circumpositions) of this sort represent an innovation. They are often transparently related to body parts or other words, and they are certainly always of fuller phonetic substance than prepositions. They form a larger, and perhaps more open, class. If there is innovation within the system formed by adpositions, it is here among the postpositions that it is taking place.

Several of the prepositions function also as

conjunctions, i.e., in governing an entire clause.
Examples are given in 4.9.3.

4.8 Ideophones

Ideophones in Kisi form a large class of words
comparable to those found in many African languages, a
class often considered to be at the fringe of or outside a
language's "core grammar"[15]. Ideophones have little in
the way of morphology and their syntax is relatively
straightforward. Their phonology, however, is typically
somewhat unusual, characterized both by sounds found
nowhere else in the language and by violations of other
phonological constraints[16]. Functionally ideophones tend
to perform expressive functions rather than purely
informational ones.

Nonetheless, despite their irregularities and
position on the periphery of language, ideophones form an

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[15] See Woodbury (1987) for arguments of how
expressive language should be integrated within language
proper even when using the formalisms and assumptions of
Lexical Phonology.

[16] Ideophones can have a more restricted inventory
than the rest of the language. Fula ideophones, in
contrast to other words in the language, are restricted to
a CVC pattern, long vowels are not distinguished from
short vowels, and there's a neutralization of contrasts.
For example, *[paw paaw faaw vaaw]* are variants of a single
ideophone as used by one speaker (Stennes 1967:16). See
also Arnott 1969:58, 65, 67, for further examples from Fula.

integral part of a language's grammar[17], and no grammar of an African language with ideophones can be considered adequate without a full discussion of them (Fortune 1962:37-38)[18]. Because this category is more controversial than others, I spend more time here developing a definition and presenting examples.

A second reason for describing this category in greater detail is that it is often neglected in traditional descriptions[19], probably because the category is not isomorphic with ones in languages spoken by the analysts (Diffloth 1972:440; cf. Nichols 1987:56).

> We greatly need to have "phonesthetic" description, as it were, become a standard part of accounts of

---

[17] Diffloth claims that in Semai (Senoic or Central Aslian group of Austroasiatic, Malaya) ideophones form "a word-class of the same order of magnitude as the first two [nouns and verbs]" (1967:249).

[18] One could argue that ideophones are crucially central at least for certain genres of discourse. In many cases narration without ideophones has been characterized as being vapid and formal. In my own experience, speakers using ideophones were generally regarded as being more eloquent than those who did not. A number of explanations come to mind for why ideophones have been neglected in general descriptive grammars. The neglect may have proceeded from either naivete or from chauvinism; European investigators may have been pre-occupied with their own languages and meta-languages. Another cause may be the general neglect of expressive language. This neglect in turn may have proceeded from the dependence on the written word that has dominated linguistic analysis.

[19] A typical example of the amount of coverage usually given to ideophones is found in Sapir's (1965) grammar of Diola-Fogny/Kujamutay. He devotes part of a page in a 129-page grammar to a discussion of such words.

languages, so that the full range of phenomena of felt phonic appropriateness can be taken into account.

<div align="right">(Hymes 1974:163)</div>

Descriptions of ideophones and words like them are needed both in terms of accountability and for comparative work.

After briefly reviewing the literature on ideophones, I will adopt a preliminary prototype definition which will delimit the class of ideophones in Kisi. I will next look at examples from, Kisi, illustrating the extent of variation in the language.

4.8.1 *Review of the literature*

As noted by several scholars, e.g., Diffloth 1972, the term "ideophone" first appeared in Doke's dictionary of Bantu linguistic terms[20].

> A vivid representation of an idea in sound. A word, often onomatopoeic, which describes a predicate, qualificative or adverb in respect to manner, colour, smell, action, state, or intensity. The ideophone is in Bantu a special part of speech, resembling to a certain extent in function the adverb.
>
> <div align="right">(Doke 1935:118)</div>

Doke further notes the special distribution of ideophones as well as their unusual phonological properties. In another entry in his dictionary entitled "Reduplication", Doke notes that the reduplication of ideophones is common

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[20] Samarin has noted that the first discussion of ideophones was even earlier, i.e., J. McLaren in his 1888 An introductory Kafir grammar with progressive exercises (1965:11

(1935:185). All of the features Doke identifies will be involved in the definition given below.

In the more recent literature on ideophones, discussions are of two types. If some simplification can be allowed, the concentration in one type is on description and in the other on theory[21]. Representative descriptive studies are e.g., Fortune 1962, Welmers 1976. Theoretical studies, e.g., Courtenay 1969, often focus on definitional issues.

The criteria that have been used to identify ideophones have been phonological, semantic, and morphosyntactic. For example, Courtenay uses purely phonological criteria for Yoruba, finding several peculiar phonotactic patterns, and notes that there are few restrictions on the part of speech an ideophone can be. "Yoruba ideophones can be adjectives, adverbs, or nouns" (1969:118).

Welmers allows for the possibility of a phonological definition, invoking morphosyntactic criteria as well. Semantic definitions he finds are less than useful because they are impossible to specify precisely (1973:462).

Newman, on the other hand, defines ideophones on the basis of phonological and semantic criteria. Newman similarly does not want to restrict ideophones to a single

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[21] The fullest bibliography on ideophones is contained in Samarin 1971.

part of speech. He considers each set of ideophones as comprising a sub-class of the relevant part of speech (Newman 1968). In discussing ideophones in Bantu, Samarin chooses to have one word class containing all Bantu ideophones. Their specific properties can be described on a language-specific basis (1971:130).

Fortune considers ideophones to be dependent on speech style.

> ... [the] special features of ideophones in Shona lead us to recognize in this language a subsystem of syntactical, morphological, and phonological units and structures, peculiar to ideophones, and characteristic of a style of speech which can loosely be termed 'free expression'. The relation of this subsystem to the central system, which is characteristic of 'formal expression', is a problem which arises out of the description of the ideophones, but which can only be partially answered here.
> (Fortune 1962:3)

Fortune sees ideophones as being closely related to a single word class, verbs (1962:4). Fortune suggests that verbs and ideophones are in complementary distribution with the conditioning feature being that of formality[22].

Definitions have also been advanced within transformational-generative theory.

> Ideophones are a class of lexical items in which semantic representations of perceptual qualities are mapped directly onto phonological strings,

---

[22] But he also comments, "In the first and commonest construction, ideophones appear in phrases after an introductory verb" (1962:6). Further, "They are used as whole, if fragmentary, utterances, given the necessary context (1962:19).

> without passing through the morphological
> component of the grammar.
>
> (Johnson 1976:241)

Though Johnson mentions phonological and semantic features common to ideophones, it is the lack of morphology that Johnson considers criterial. Fordyce (1983), on the other hand, sees the ideophone as constituting a special "phonosemantic" class.

Marivate (1985) considers ideophones to be a sub-class of verbs, as "a non-verb verbal". Because the "ideophonic phrase" acts just as does a verb, it should belong to the same lexical category. A special feature allows that the auxiliary can be deleted at the surface. Kunene (1965) sees the Southern Sotho ideophone as an expressive verb and Voeltz (1971) wants to derive Zulu ideophones from full sentences.

We see, then, that there have been a number of approaches taken to defining ideophones. What distinguishes the approaches is the weighting given to a particular aspect, but in actual practice usually all features are invoked. Samarin's "diagnostic guide" for expressive language is relevant here because he extends his characterization beyond the strictly linguistic (cf.Welmers 1976:138).

1. Phonology: onomatopoeia, alliteration, sound symbolism, reduplication, marginal phonological features, rhyming, punning, sub-morphemic segments (e.g., *fl-* and *sl-* in English), and so on.
2. Semantics: words characterized by restricted semantic domain, sensual (as opposed to cognitive) reference,

extreme specificity of meaning (with little or no generic branching?), and so on.
3. Ethnography: the community's attitude toward the words, characteristic channels of communication, and so on.
4. Esthetics: emotionally heightened discourse.
5. Special types of discourse: secret languages, child language, magical incantations, artistic language, and so on.

(Samarin 1970:163)

It is this sort of definition that will be advanced for Kisi below, i.e., one combining a number of different criteria.

A theoretical issue arising in the consideration of ideophones revolves around the extent to which they can be considered to be a part of the core system of the language. Idealizations of language data and analyses limited to intuitions and elicitation sessions might ignore or even overlook ideophones, especially because they tend not to appear in traditional fieldwork situations (Samarin 1965, 1967).

Earlier writers tend to feel that ideophones are on the periphery of language.

Ideophones are clearly part of language proper but they exhibit so many special peculiarities on all levels that they have to be regarded as constituting a sub-system of their own. Ideophonic forms, ideophonic constructions as well as ideophonic phonemes must be described apart from normal structure.

(Fortune 1962:37-38)

Besides being treated as expressive language, ideophones have been treated as a single separate word class (Samarin

1971) and as separate sub-categories of other word classes (Newman 1968).

It is unfortunate that ideophones have not been more tightly integrated into language descriptions proper, for they seem as universal a category as any other. They often draw on sound symbolism, a resource exploited (perhaps) universally, and use a morphological process found in nearly all languages, reduplication (Key 1965, Moravcsik 1978). For example, Hindi uses palatal stops and high front vowels to convey a 'vibrant' or 'pulsating' light effect (Hock 1986:288-89); see also Martin 1962 for Korean examples drawn from a pervasive system.

Besides being important for universals, ideophones have further theoretical interest. In a paper examining sound symbolism cross linguistically, Diffloth (1972) raises the important theoretical question concerning the arbitrary relationship between sound and meaning. It is often true that ideophones feature a less arbitrary relationship between sound and meaning than do other word classes. Ideophones may represent the residue of an earlier feature of language, if we assume that the relationship between sound and meaning was once less arbitrary.

The source or origin of ideophones is indeed problematic. Analysts have rightly felt that sound

symbolism forms an important component to the make-up of ideophones. Onomatopoeic sources account for only a small part of a language's ideophonic substance (Welmers 1973:463), but sound symbolism may play a larger role. "If only part of the ideophones of a language are mimetic, there may be in the rest a certain element of sound symbolism" (Samarin 1971:159).

Ideophones can even exploit language-specific (vs. universal) phonological features in conveying meaning. Greenberg and Sapir identify the importance of a phonological contrast used throughout the language in a system of cross-vowel height harmony. This contrast, they point out, is also used sound symbolically in ideophone pairs; one member is associated with one set and is consistently considered 'more', 'larger', or 'bigger' than the other member, which is always associated with the other set of vowels (Greenberg & Sapir 1978:308, FN 5).

One quantitative measure of the importance of ideophones to a language is their sheer number. Samarin has identified over 5,000 different ideophones in Gbeya, a (non-Bantu) Benue-Congo language spoken in the Central African Republic, and he has counted 2,600 in a Zulu-English dictionary (1970:155). A qualitative measure is their importance in evaluating the "effectiveness" of a public speaker or story-teller (see quotation from Samarin 1970:163 above). I was told by several people that the

best speaker among the young men in a Kisi town was a
Guinea worker who liberally sprinkled his speech with
ideophones.

Thus, although ideophones form a vital part of a
language, because of their intractibility to analysis (and
perhaps some ethno- or linguistico-centrism) they have not
been properly integrated into language description[23] and
linguistic theory. It seems clear that they should be. A
further issue, and one not pursued here, looks at why
there should be a class of words such as ideophones.

> What, therefore, is the significance of the fact
> that (1) certain kinds of meaning are encoded in
> a single --and often very large -- class of
> words that (2) stands apart to some degree or
> other from the 'normal' linguistic structure?
> (Samarin 1971:161)

Although I will not attempt to answer this last question,
the following definition and description should illustrate
well the importance of ideophones and their integration
into a particular language.

4.8.2 *Criterial features*

In this section I present in some detail the features
that define ideophones in Kisi. It should be remembered
that not all ideophones have all of the features listed
below. Put together the features exemplify the best

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[23]   There are exceptions to this criticism, of
course. A recent description which attends to ideophones
in an African language is Andersen's (1987) outline of
Lulubo phonology.

possible ideophone, a prototype ideophone with which most attested ideophones share features.

The category to which ideophones belong comprise a rather fuzzy and leaky category, a not unexpected situation; "in the world of experience all boundaries show some degree of vagueness" (Labov 1973:352)[24]. The best recourse, then, is to a prototype definition even with a class of words so notoriously slippery as ideophones. Defining the features and membership of words performing an expressive function is a daunting task, e.g., Carr 1966. The features defining the category are multiple and are shared by other word categories. Furthermore, some features are more important than others. It is an "imprecise" although "focused" category.

> a category which cannot be defined in such a way that for every member x of its domain (that is, the set of things to which the category can be meaningfully applied), the definition determines a truth-value to the statement that x belongs to the category in question. ... there is in an imprecise category a zone in the middle where membership is not clearly defined.
>
> (Dahl 1985:3)

See also Labov (1973:342f) for a discussion of the limitations of the (traditional) strictly categorical view.

I begin by discussing the most remarkable feature of Kisi ideophones, their phonology.

---

[24]   Cf. Grammont's (1901:301) similar comments regarding onomatopoeia and expressive language, as referenced in Jakobson & Waugh 1979:180

4.8.2.1 Phonological

Nearly all investigators have commented on the unusual phonetic features associated with ideophones, their "expressive intonation" (Newman 1968). The range of features that are subsumed under this label in Kisi are given below.

(90) Phonetic features of Kisi ideophones

1. Raised or lowered register (F_0 or pitch range)
2. Rapid modulation or exaggerated range of register
3. Phonation: breathy voice, creaky voice, voicelessness and whisper
4. Duration: overly short or long
5. Rate: faster or slower than normal
6. Set off from the rest of the sentence by a pause
7. Using phones not belonging to regular phonemic inventory
8. Violating phonotactic constraints of language

Not all ideophones have each of these features, but it is generally true that an ideophone will have at least some of the characteristics given above.

For example, the ideophone for 'continued action (always motion) of the verb for some time', háãã... is pronounced with a raised register and is usually lengthened considerably longer than other Kisi words. Furthermore, the vowel is nasalized as it is in no other Kisi word in this environment. There are nasalized vowels

appearing after nasal segments, e.g., [nää] `us' but never after /h/[25].

(91) Regular nasalization in Kisi

L L
mõõng   `two'
L H
nyõõ   `thing'

Vowels not regularly nasalized after /h/

L L L H
haalaa   `to arrange climbing sticks for beans'
L L   H
haangndo   `a small red ant whose bite is slightly poisonous'

The examples above show that although vowels are regularly nasalized after nasal consonants, nasalization does not regularly occur after /h/, as it does in the Kisi ideophone presented above.

An example of the way in which ideophones violate phonotactic constraints is by allowing a voiced labial-velar [gb] to appear initially. In non-ideophonic words, the voiceless labial-velar [kp] is allowed but not [gb]; [gb] appears only medially as an allophone of /kp/.

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[25] That nasal vowels would appear in this environment is not unexpected. Nasalization often appears in conjunction with heavy air flow, such as that associated with the fricative /h/, due to the introduction of anti-resonances (zero's), parallel to the effect of nasalization (Ohala 1982).

(92) [gb] in non-ideophonic part of language

H
kpe   'only, alone'
L   LH
kpe[gb]oo   'cockroach'[26]

In ideophones, on the other hand, [gb] can occur

initially.

(93) [gb] in ideophones

H H   H H
gbolung gbolung ...   'sound of a weaver's shuttle
                         moving back and forth'
H M L
gbu-u-u   'sound of far-off thunder'

Notes: 1) The three dots after the first ideophone,
          "...", symbolizes that the reduplicated stem
          may be repeated.
          2) The hyphenated vowel in the second ideophone
          symbolizes that the vowel can be prolonged.

Other sequences allowed only in Kisi ideophones are

initial consonant clusters. Elsewhere sequences of

consonant and glide are found, but no such sequences as

those shown below are heard anywhere else.

(94) Consonant clusters found only in Kisi ideophones

L   L
vwum vwum ... 'sound of a heart beating rythmically'
L   L
flo-flo[27]   'quickly'

---

[26] It is likely the stem of 'cockroach' is built on a
reduplicated form {kpe-kpe}. Many other words for animals
appear to have reduplicated stems, e.g., *suusuuwo*
'otter'; *kingkingndo* 'wasp'; *ngOngOngndo* 'bullfrog'. It
seems likely, then, that the intervocalic [gb] in the word
for 'cockroach' is an allophone of the phoneme /kp/ (see
4.1.3 Names).

[27] The unreduplicated form of this word was recorded
as [*filo* HL] and glossed as 'for a short period, right now'.

A third type of violation of regular Kisi phonological constraints is in permitting vowels which occur nowhere else in the language.

(95) The mid central vowel [@] in ideophones

H L L   H L L
fas@ka-fas@ka   'quickly, in a rough manner'

There are often neutralizations of regular phonemes among ideophones, as in the Fula example given above; [*paw paaw faaw vaaw*] are variants of a single ideophone as used by one speaker (Stennes 1967:16). In Kisi the forms *fElE-fElE* and *vElE-vElE* are considered to be acceptable alternants for the same ideophone used in describing 'a slow steady process such as someone breathing rheumatically or water trickling'. This "neutralization" has been noted by others as being characteristic of expresive language in general.

> Another distinctive characteristic of expressive vocabulary reported for a number of languages can be observed in Iroquoian. This is the lack of what Diffloth (1976) terms lexical discreteness, noted by him in Semai and Bahnar, by Anttila (1975), and by Samuels (1972) in English (among others).
> (Mithun 1982:54)

A second phonological feature of Kisi ideophones is related to their syntax. Ideophones occur after the verb at the end of the verb's clause and are set off from the preceding material by a slight pause[28]. This pause may

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[28] The origin of this pause may be due to physiological factors. In many cases ideophones are accompanied by effects created only with increased force. The pause may allow for extra breath to be drawn and may

occasionally take the form of a change in tempo, as the speaker switches from a normal pitch range and rate of speaking to an atypical or irregular one. At the least, the ideophonic material is marked as different from that which it precedes. In the first example below, a glottal stop was heard after the verb; in the second a slight pause.

(96) Pauses setting off Kisi ideophones

```
   L    H         H  M  L 29
   o kwE [?] dE-E-E          'He went slowly.'
   he go   Ideophone
H  HH  H     H L L  H L L
i liindang pOlOkO-pOlOkO     'I got myself muddy all over.'
I be-muddy-Pl Ideophone
```

Whatever the phonetic nature of the change at the interface between ideophone and the rest of the sentence, it is undeniable that ideophones are set off. Whether this break is physiological or linguistic has not been determined.

As far as any internal phonological structure (such as phonesthetic partials) to Kisi ideophones, the case is doubtful. It has often been argued that ideophones often rely on onomatopoeia, phonesthemes, or sound symbolism. The first two relationships are not widely attested in

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in fact have been phonologized. See Ohala 1974a and 1974b for illustrations of ways in which non-linguistic physiological effects can be phonologized.

[29] "M" indicates a tone midway between the High that begins and the Low that ends the ideophone. Actually, the tune of the sequence is something like a gradual fall. The vowel here is devoiced when prolonged.

Niger-Congo (Welmers 1973:462) and indeed are found seldom in Kisi, although onomatopoeia does occur. Below are given two onomatopoeic animal names and the word for the crowing of a rooster.

(97) Onomatopoeic animal names

LL LH
nyaayoo   'cat'[30]
HH   HH   H
ngOOngngOOngndo   'bullfrog'
L L HH H
kukuluuku   'crowing of a rooster'

As may have been inferred from some of the other examples above, onomatopoeia is an important factor in the composition of Kisi ideophones, but it is not the only one nor is it the most important one. Samarin claims, "It is extremely doubtful that in any African language even ten per cent of the ideophones derive from non-linguistic sound" (1965:119)[31].

Sound symbolism, however, is a more likely way of characterizing the relationship between ideophones and their meaning. For example, there are relationships of the universal sort representing use of what Ohala calls

[30]   The word for the 'mewing of a cat' in Japanese is _nyao_   (from Frei n.d. in Bolinger 1975:232, Exercise 41).

[31]   This generalization seems true of languages with large categories of expressive language. In Semai also onomatopoeia seems relatively unimportant (Diffloth 1976:262). In other words there is an inverse correlation between size of expressive vocabulary and percentage of the vocabulary classificable as onomatopoeic.

the "frequency code" (Ohala 1983). High pitch and high
vowels are used with words connoting smallness and low
pitch and back vowels with words connoting largeness. I
give below some examples of words associated with
slowness and largeness, all of which have back vowels in
their stems (see also "rice-beating" ideophones below).

(98) Ideophones exploiting the frequency code

```
H  LL   H  LL
cOlOO-cOlOO     'sound of heavy rain'
 L      L
vyum-vyum       'sound of heart beating slowly and
                regularly'
```

The evidence for such correlations is not extensive, and
thus we must be chary of claiming too much structure to
the ideophonic subsystem (but cf. Westermann 1927 & 1937
and Wescott 1973 for examples from West African languages
where this correspondence holds more widely).

One generalization about the tonotactics of Kisi
ideophones is that they are generally high-toned. Even
when not exhibiting a raised register, ideophones will
have often high tones throughout. This feature stands in
marked contradistinction to other words in the language,
which possess a great variety of tonal patterns with no
one pattern being dominant (see 3.3.2 Tonotactics).

The phonological criterion has been considered
essential in descriptions of ideophones in individual
languages. In others, the phonological criterion is seen
as subsidiary to morpho-syntactic considerations. The

prototype definition adopted here allows us to include in the class of ideophones words which do not necessarily have unusual phonetic characteristics. Nonetheless, most Kisi ideophones are phonologically unusual and most other words are not. The only other words which show such phonological irregularities are exclamations, excluded on grounds discussed below.

In summary, then, Kisi ideophones not only have a skewed inventory when compared with the phonemic inventory of the rest of the language, but they are also governed by different phonotactic constraints. In addition, there seems to be very little in the way of (morpho)phonology in a language particularly rich in morphological alternations. The question arises as to whether the phonology of Kisi ideophones constitutes a separate system and how that system compares to other such expressive subsystems cross-linguistically. On the basis of the evidence from Kisi, we must discuss ideophones as systematically different from the rest of the language but nonetheless as integrally belonging to that language (see Childs 1987a for a discussion of the implications of the differences between the two).

4.8.2.2 Morphological criteria

Ideophones are characterized by having virtually no morphology. The only inflectional morphological process

that is allowed is reduplication[32]. Furthermore, this process does not have general productivity, applying only to some ideophones. Another feature of reduplication in this part of the language is that some stems may be repeated only once, while others may be reduplicated unrestrictedly.

(99) Ideophones which cannot be reduplicated

H L H L	
fElEmEngndEng	'surprisingly, astoundingly, unexpectedly'
H - M - L	
wa-a-a ...	'sound of rice being sown or of rain gently falling'
HL L L	
bia-a-a ...	'sound of soft rain'

(100) Ideophones which can be reduplicated only once

H H L H H L	
piliko-piliko	'used to describe things going by in a series'

(101) Ideophones which must be reduplicated

H H H H	
fElE-fElE	'slowly and steadily'
H L L H L L	
bakala-bakala	'sound of rain falling in single, heavy droplets'

(102) Ideophones which can be reduplicated more than once

H H	
gbung gbung ...	'sound of rice being beaten by a single person'

---

[32] In some languages (vowel) lengthening can be treated as a subset of reduplication, i.e., reduplication takes place but only the vowel is copied. See the literature on autosegmental phonology, e.g., Marantz 1982, and see Childs 1985 for a discussion of the relatedness of the two processes in renewing the system of verbal extensions in Kisi.

```
F      F
```
pim pim ...   'sound of rice being beaten by
                       two or more people'

Furthermore, some ideophones may simply be lengthened,
that is, the ultimate or penultimate vowel may be
protracted (expressively) for durations much longer than
any vocalic sequence elsewhere in the language[33].

(103) Ideophones with vowel lengthening

```
   L   L L   HL H
```
mbo pela dE-E-E-u   'He belched BURP.'
Conj-3ps belch Idph
```
   H H  L
```
si-i-i   'continue for a short distance or period'

Note how the second ideophone does little to strengthen
the case for extensive iconicity among Kisi ideophones.
The vowel is prolonged as would not be expected for
something of short duration.

Less arbitrary relationships are exemplified in
processes described by Woodbury 1987. The first is
"rhetorical lengthening", for example, in English (e.g.,
You're cra-a-azy! [Woodbury's example]); a second is "Foot
Stretching" in Central Yupik Eskimo, a process which
lengthens and raises the pitch of the first foot of an
intonational phrase in order to "intensify the degree to
which content of the word it affects is intended, and

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[33] Because vowel-lengthening does not follow the same
pattern as reduplication, i.e., it does not operate under
the same constraints, we may want to see the processes as
separate. Vowel-lengthening seems to be virtually
unconstrained, except insofar as the physical limitations
of the speaker are concerned.

marks it as 'new' or 'comment' in the discourse" (Woodbury 1987:715). In the case of both of these processes there is an iconic relationship (and a gradient one) between sound and meaning.

Reduplication is a more tractable and regular process in other places in the language. For example, noun stems are repeated in the distributive construction, but the process applies to all nouns not just a subset of the total nouns. Thus it does not seem justified to see ideophones as possessing anything in the way of morphology. It seems, then, that this negative criterion, the absence of morphology, is useful for our definition.

There is a hint of morphology in ideophone parallels with verbs. Some ideophones in Kisi may be related to verbs, comparable to their status in many Southern Bantu languages, e.g., Marivate 1985, Kunene 1965. If Kisi ideophones are also so related, they may possess some of the same verbal morphology. The construction of interest is the Middle extension (see 6.2.4.5 Middle). The velar nasal [ng], suffixed to the stem, often represents the Middle extension and there are pairs of ideophones with and without the segment.

(104) Verbs and ideophones

		L L L LH	
(Verb)	*takitakio*	'to talk nonsense, stagger, to trick or deceive someone'
(Idph)	*takingtaking*	H L H L 'unsteadily, wobbly, drunkenly (used with *nEiyo* 'walk, travel, go')'
(Idph)	*gbu-gbu ...[34]*	L L 'sound of broad drum with a large area'
(Idph)	*gbung gbung*	H H 'sound of rice beaten by one person'

Both pairs of examples suggest there might be some
relationship between the members of each pair, based on
the Middle verb extension.

Other possible derivational relationships are
exemplified below:

(105) Ideophones related to other word classes

LL H   HH HH   H H
muiyo   *mui-mui*   *mui*
'mosquito'   'finely ground' 'id, pinch sharply'

Some ideophones have cognate forms which can appear after
the auxiliary *co* in exactly the same position as an
adjective or as the infinitive of regular verbs in one of
the progressive forms (see discussion above 4.5
Adjectives).

(106) Ideophones and verbs

H L L   H L L
pOlOkO (pOlOkO)   '(Ideophone) mixed thoroughly'
H   HH H   H L L   H L L
i liindang pOlOkO (pOlOkO)   'I got (thoroughly) muddy.'

---

[34] The three dots "..." symbolize that the root can
be repeated.

```
I  be-muddy-Mid  Ideophone
H   H   HH     LH   H L L   H L L
i  co  mOmO  dio  pOlOkO-pOlOkO³⁵    `I am eating the nicely
I  Aux  food  eat  Idph/Adj          mixed food (soup and rice).
   L    H    L   H L L    H L L
 lamndo  co  pOlOkO-pOlOkO          `The soup is properly mixed.'
   soup  Aux  Vb/Adj/Adv
```

In the first two sentences the word of interest is an
ideophone. In the third sentence it fills the slot of a
non-finite verb (adjectives and adverbs are also allowed
here). It is thus possible in some cases to see a
relationship between verbs and ideophones in Kisi.
Because this relationship is not widespread enough and the
directionality is unclear[36], it is unwarranted to claim
that ideophones are actually a sub-category of verbs.

This digression should not divert us from the major
point of this section, namely, that ideophones lack any
real morphology.

4.8.2.3 Syntactic criteria

Ideophones have the one remarkable syntactic feature
that they occur, in most cases, only clause finally[37].

---

[35] Note also how the ideophone, which translates into
an English adjectival phrase, is nonetheless found in the
clause-final position characteristic of all ideophones.

[36] Doke sees the derivational relationship between
ideophones (his "radicals") to be bidirectional. "The
process of formation of radicals from verbs is seen to go
on in many Central Bantu languages, in addition to that of
verbs from radicals" (Doke 1931:224).

[37] In Semai expressives "precede sentences or
isolated noun phrases" [my underlining] (Diffloth 1976:255).

(107) Syntax of ideophones

```
L   LH  +H  H  H+
ma pei fikiki        `It filled (it) to the very top.'
it fill Ideophone
L     R    L   L   L  L +H H  H  H+
mEngndang ma co huno fElEfElE
water       it Cop come Ideophone
`The water is trickling out.'
L   L H   R   H H   L   H   F
o hiwi hElle o lamndo pung
he put salt on soup    Idph
`He put an excessive amount of salt on the soup.'
```

The examples below show how ideophones can appear

elsewhere than in final position; I use the same ideophone

as in the last example above, where the ideophone is found

at the end of the sentence.

(108) Ideophones in non-final position

```
L   L H  LH  F   H  LL HH H
o hiwi saa pung a siElEiyo
he pass-Cs Saa Idph with laziness
`He made Saa Emph to be lazy.'
LL  H H  R  H F     F  H L   H
sia hiwi hElle pung-pung o lamndo
Nam pass-Cs salt Idph     in soup
Sia put an excessive amount of salt in the soup.'
L   L H   H  H  LH  F   H  L  L  L L  H
o hivil la po nuu pung a bolle kolaleng
he pass-Cs-Ben me son my Idph with head hard
`He made my son become quite stubborn.'
```

All three examples show how an ideophone appears before

different sorts of prepositional phrase.

A second syntactic fact about Kisi ideophones has to

do with selectional restrictions. Often an ideophone will

occur with only one or a limited number of verbs. For

example, the   ideophone *fikifiki* occurs only with

peiyo `to fill'. The ideophone *fasθka-fasθka* `rudely,

roughly, sloppily' can occur with verbs meaning `bathe',

'go', 'eat', 'talk', 'walk', but not with 'run'. There are, however, ideophones which do not have such severe restrictions, for example, *te-e-e* 'going on for a long time' seemingly has no restrictions except that the verb involve an action that can be prolonged. Ideophones which become leached of specific meaning become adverbs.

Another general limitation on the distribution of ideophones is that they occur, in most cases, only in declarative affirmative (non-embedded) sentences. They rarely appear in negations, commands, or in questions. No other word class is so restricted.

(109) Ideophones in affirmative declaratives

```
L   L H HHH   H  F
o mEsEliaa ndu ma
he reduce it Idph
```
'He reduced it considerably.'
```
L  LL  H  L L  L   L H H H  L    H H L
o tuingi kili binggioo o ying yaau
he take stick small from fire Idph
```
'He yanked a small stick out of the fire.'
```
 L  H  LL LH  LL LH  H  HH  L  R   H   H     L LL L
ng lo viinOO touwOO mbo haa mal hemndo kpOngmgbOsOOlo
we keep thief chase and-he until drop gourd Idph
```
'We kept on chasing the thief until he dropped the gourd.'

There are, of course, exceptions to these generalizations, much as there have been exceptions to all the criteria we have invoked. In the first example below the ideophone *ye-ye* appears in a negative construction and in the second *tudu* appears in an embedded (relative) clause. In the third example the first ideophone (*muEEng*) appears in a negative clause, and the second (*ti*) after a focused construction (with *ni*).

(110) Ideophones in non-prototypical environments

H   L H H H   H H   H H   L   LL   R   H   L   HL   HH L H   H   H
kE te a pese-pese ndu pE ma dOu hElle, o kEE yeela ye-ye le
but if you break it if and-you pour salt, it deny sweet
Idph Neg
'But if you smash-smash it, and you put salt on it, it
can't help but be delicious.'

     H   HH H H   H   L   H H   H   HL   H
    i yeema o binggi tudu wo hoo le
    I like it short Idph NCM this Neg
    'I don't want this short one.'

LL H   R   L H   HHL   H   HL L   H   F H H   H   H   F
saa nO ting hOlteng muEEng le sabu kong o ci lapi le ni ti
Nam have small eye Idph Neg reason that he see well Neg
Foc Idph
'Because Saa's eye is slightly closed he can't see well.'

Although ideophones prototypically appear at the end
of simple declarative clauses, it is also possible for
them to appear in other environments. Similarly, although
there are severe selctional restrictions on which verbs
ideophones can occur with, some ideophones occur with many
different verbs.

4.8.2.4 Semantic criteria

Ideophones are typically quite specific in what they
mean, usually evoking some concrete imagery[38]. They
appeal to the senses and they have a narrow meaning,
usually limited to one type of action or state. In the
rice-beating and rain ideophones given below, it can be
seen how restricted the meanings of ideophones can be.

---

[38] This fact may be related to their limited
distribution, i.e., occurring only with a few verbs.

(111) Rice-beating ideophones

H   H
gbung gbung ...   'sound of rice being beaten by a
single person'

F   F
pim pim ...   'sound of rice being beaten by
two or more people'

Note how different the two ideophones are phonetically.

They are both restricted to use with *cuuwo* 'to beat, pound

(usually rice) in a mortar with a pestle'.

(112) Rain ideophones

H-H-L
wa-a-a ...   'sound of rice being sown or of
rain gently falling'

HL L L
bia-a-a ...   'sound of soft rain'

H L L   H L L
bakala-bakala   'sound of rain falling in single,
heavy droplets'

Note: In the first two examples the vowel is devoiced
near the end of the ideophone.

Another semantic characteristic is that ideophones usually

involve an explicit appeal to one of the senses. Both the

rice-beating and rain ideophones appeal to one's sense of

hearing (Martin's (1962) "phonomimes"); other

possibilities (his "phainomimes") are illustrated below.

(113) Ideophones appealing to different senses

                H L   H L
Sight: *hiang-hiang* 'loose-jointed, floppy'

                H   L
Touch: *cam-cam*   'lukewarm'

                F
Taste: *pang*   'tasteless, insipid, unpalatable, said
of food that has no flavor to it'

                HH H   HH H
Smell: *kpiini-kpiini* 'strongly offensive to sense of
smell, often used with reference
to flatulence'

There are often paralinguistic features associated with Kisi ideophones. For example, the last ideophone (*kpiini-kpiini*) is accompanied by a pronounced crinkling of the nose.

Most of the ideophones surveyed appeal to the senses of sight and sound; fewer appeal to touch, taste, and smell. What is crucial is the registering of the subjective impression of some sensation through these words.

As with all the other criteria we have examined thus far, there are ideophones which are more general in their appeal. For example, there are ideophones with quite elusive semantics (see Samarin 1969, Westermann 1937), seemingly used only to underscore the meaning of a verb (or the speaker's emotions as regards the meaning of the verb).

(114) Ideophones underscoring semantics of verb

```
   L LH  HL  L H H  F
kpeloo hoo mEsEla ti
bed   this be-small Idph
'This bed is quite small.'
L  L L  H HH  H L
o kelu bOlOO tusu
she cut banana-tree Idph
'She cut down the banana tree.'
```

In both cases the ideophone adds no explicitly statable semantic component to the verb, except that of intensity or the speaker's emotion regarding the event.

4.8.3 *What ideophones are not*

In many cases ideophones have been considered adverbs, so I will begin by establishing differences with adverbs, the features of which in Kisi are discussed above. It is clear that ideophones do not refer to time or place as do locative and temporal adverbs.

(115) Adverbs of time and place

```
 LL L  L  H L
 hau o de nanung          'He ate here today.'
 today Pro ate here
 L  L  L L   H  F
 o co lakO nda sung       'She will go there later.'
 Pro Aux go there later
```

Ideophones never have such a semantic component, though they can convey a sense of duration. Time and place adverbs have fewer restrictions on where in a sentence they can occur and have none of the unusual phonological features associated with ideopohones.

A second category of adverbs from which ideophones need to be differentiated is those conveying quantity and intensity, and here the dividing line is not so clear. Adverbs of quantity are words such as *kpo* and *fao* meaning, 'a lot, many'. Adverbs of intensity have meanings such as 'very'. One clear example is the word *bO* which can mean 'large' when used alone or 'very' when used with an adjective.

(116) Uses of *bO*

```
 LL H  L  H
 nauwo co bO       'The cow is big.'
 cow Cop big
```

```
H  H  L  H  H
i we o bO le            'I was not big.'
Pro Cop NCM big Neg
L  L  H  HH L LL
o co bO kOOyOlOO        'She is extremely listless.'
Pro Cop very weak³⁹
L  L  H  HH
o co bO heu             'She is quite big.'
```

Note also how *bO* can be used after the copula and how the word can be negated. Ideophones do not usually follow these patterns. Furthermore, ideophones can never co-occur with other ideophones.

On semantic grounds the differences are also clear. Other adverbs of intensity are *kpe* 'real, actual' and *kEsE* 'real, very, actual'. They, too, have a more general meaning than any ideophone. Though ideophones can convey notions of quantity and intensity, these meanings are secondary. The primary meaning of an ideophone is more particularistic, concrete, and focused.

Semantically adverbs are much more vague in their meaning. The common meaning of an adverb in Kisi is something like 'a lot', 'greatly', or 'very', in other words, a general intensification or augmentation of an action. An ideophone, on the other hand, picks out a particular aspect of an activity, underscores it to bring it into prominence. The difference here is scalar to be

---

[39] In fact there is some common ground in the meanings of quantity and intensity, suggested in the different uses of <u>bO</u>. This overlap is exploited elsewhere in the grammar; see the discussion of reduplication and verb pluralization in 6.2.4.7 Plural.

sure, and it is necessary to consider the full
constellation of features before reaching a final
decision.

These adverbs can be differentiated from ideophones
on phonological grounds as well: they rarely show any but
the most commonly used expressive features in the
ideophonic inventory. Occasionally they will be spoken
with higher pitch or loudness, but rarely with any of the
more exotic features discussed above.

Ideophones are closest in meaning to adverbs of
manner. The claim here is that there are few such adverbs
in Kisi, and none of them have the other prototypical
characteristics of ideophones. Typical manner adverbs are
words such as 'quickly', 'slowly', 'clearly'. In most
cases these meanings are represented by words that are
clearly ideophones. For example, the word for slowly is
dE-E-E (with a long, gradually falling pitch contour)
given earlier. This ideophone has unmistakably
ideophonic features: the pitch contour is one that falls
slowly over the course of the vocalic portion of the word,
the vowel can be prolonged indefinitely, and the vowel can
eventually become devoiced. Other of these commonly
adverbial meanings are also realized as ideophones.

Exclamations also have similarities with ideophones
(discussed below in 4.11 Interjections); these
similarities are basically phonological. Exclamations can

be expressively lengthened or shortened, can be
accompanied by creaky voice, etc. Similarly to
ideophones, they are set off from the rest of the sentence
by a pause.

Semantic criteria help to tease the two apart.
Ideophones have a relatively narrow meaning and clear
denotations. Exclamations tend to directly express a
speaker's emotions and are closely tied to context. A
minimal triplet shows the differences between adverbs,
exclamations, and ideophones.

(117) Minimal triplet

Adverb:	$\overset{H}{bo}$	'a lot, big, very'
Exclamation:	$\overset{L}{bo}^{40}$	'exclamation expressing surprise'
Ideophone:	$\overset{F}{bo}$	'sound of an egg dropping'

Exclamations are further different from ideophones in
that they rarely have the severe selctional restrictions
of ideophones; they have no direct bond with other words
in the sentence in the way that ideophones are related to
verbs. Exclamations usually occur at the beginning of a
sentence or even without a sentence. Ideophones, on the
other hand, always follow verbs.

In sum, then, we have been able to differentiate
ideophones from two other classes of words with which they
share features. Neither adverbs nor exclamations,

---

40 With some speakers the tone on this exclamation
is a rise.

however, possessed all or even a majority of the features

possessed by ideophones.

4.8.4 Productivity

A final question arises as to the productivity of

ideophones, specifically, whether or not there are regular

processes for creating new ideophones[41]. It is rare to

find any mention of an (African) ideophone actually being

created. One example is an anecdotal account published in

1913 (Junod 1913). After noting that ideophones are

language specific, Fortune writes,

> The stock of ideophones in any one language is
> the result of independent and probably recent
> coining. We must think of these words as
> continually emerging, continually being replaced
> and disappearing, at a speed quite different
> from that attending the change in forms in nouns
> and verbs not derived from ideophones.
>
> (Fortune 1962:40)

Native speakers were never able to recall having heard a

new ideophone being coined, though they admitted that new

ideophones were "tested" at the chief's court, "They

either passed into currency or disappeared" (Fortune

1962:40).

Innes also has claimed that ideophones are created

"on the spot", in his case by Mende story tellers

---

[41] Diffloth suggests that ideophones (as he has
observed them in Southeast Asian languages) may constitute
an open class. "In some languages, the size of the
ideophone class is of the same order of magnitude as the
verb class, or even the noun class (Samarin 1972), in
others, the class is open" (Diffloth 1972:445).

(1964:18); Samarin strongly doubts this claim Samarin

(1967:40). Okonkwo (1974) also maintains that ideophones

can be created spontaneously.

> They are often built at the spur of the moment from
> sounds, ideas, or other impressions. One interesting
> thing about them is that once formed, the impression
> they attempt to create is understood.
> (Okonkwo 1974 as quoted in Maduka 1982:2)

Maduka (1982) states that there may be some productivity

or internal structure to the system of ideophones in Igbo

(Igboid, Nigeria) and Yoruba (Yoruboid, Nigeria). His

approach involves componential analysis, and he identifies

recurring partials in much the same way as others have

done, e.g., Bolinger's (1950) phonesthemes in English,

Carr's expressives (1966) in Malay/Indonesian. Although

he gives no examples, Maduka hints that new ideophones may

be formed using the patterns he presents.

Innes (1964) also claims that ideophones can be

spontaneously created, but Samarin casts doubt on this

claim.

> The fact is that it is highly unlikely that people
> make up ideophones 'on the spot', as some have
> claimed (Innes 1964). It is not enough to rely on
> the statements of a few informants who professed not
> to have known the ideophones (as Innes, in a personal
> communication, explains). After all, no speaker of
> any language controls all of its vocabulary.
> Besides, in my interviewing of 30 or 40 Gbeya
> informants I found no one who was ignorant of any of
> the ideophones I obtained from other Gbeya.
> (Samarin 1967:40)

Cross-linguistic comparisons would be crucially important

in unraveling the productivity and evolution of

ideophones. Diffloth notes ideophones can be created in Semai "in taboo situations, to create proper names, and also to invent insults which the victim does not understand" (Diffloth 1972:446, FN 3). Because of their prominence in expressive discourse, it seems likely to me that ideophones can be created, but as yet the question is still unresolved. The answer may be that in some languages ideophones can be created, while in others they cannot (see Peterfalvi 1970 for a review of experimental studies of sound symbolism).

Cross-linguistic studies are also lacking, with the notable exception of Nichols 1971, which looks at sound symbolism in western North American languages, finding it is an areal phenomenon of some complexity. In terms of studies of African languages, few studies exist. Most investigators seem to think that it is unlikely that cognates will be found, as is suggested in Fortune's remarks above. Impressionistic judgements have suggested that ideophones in fact constitute a rather unstable class (but cf. Samarin 1971). My own investigations show that ideophones are indeed highly variable in both Kisi and Swahili (Bantu, East Africa).

4.8.5 Summary

No rigid set of necessary and sufficient conditions is available to define the class of ideophones in Kisi.

The examples above show the features that most ideophones in Kisi have. We have identified exceptions to every feature listed, and we have noted that no one ideophone possesses all of the possible features.

It seems clear, then, that we must be satisfied with a prototype definition, one which does not require necessary and sufficient conditions. In fact, as has been seen in the discussion of other word categories above, necessary and sufficient conditions are rarely possible with even the most basic categories; there is always some leakage or gradual fading of one category into another. Word classes are not discrete, and this should not surprise us for language generally abhors such neat compartmentalization as linguists are wont to propose.

We should not be surprised that ideophones in particular exploit such gradualism. Expressiveness has none of the binarity of other, more "logical" sectors of language. In fact it is probably their expressiveness and adaptability to individual differences that makes ideophones so aesthetically appealing.

4.9   Conjunctions

Kisi has a rather sparse collection of conjunctions, compensated for by the multiplicity of functions of each (see Kay 1977 for an evolutionary perspective on this paucity). Conjunctions are words which join together

parallel structures, clauses, phrases, or words.
Conjunctions which connect coordinate structures are
those given below.

(118) Coordinating conjunctions

```
H
a            `and'
L    L H  HH   H  LL H   H  L   R
o kpesengial la maalong a kEmbOng
Pro pile-Pl-Ben me rice Conj palm kernels
`He piled up for me rice and palm kernels.'
  H
kE           `but'
L   L   L   H L   L H    L H   H  L  H   H  HL   H
i cangnung o i celeng coo, kE, o co lE hei le
it start Prep it another Post, Conj, it again this Neg
`It can start up on another but not on this again.'
  LL
baa          `or'
LLH  LL   L   H H  H  H  LL H  H  H   H
ciEi hoo pOmndo o co ni baa o co pOm le
town this dead it Cop Foc or it Cop dead Neg
`Is this town dead or not?'
```

In the case of these conjunctions neither one of the two
structures joined by the conjunction can be analyzed as
dominating the other. In other cases of conjunction, one
clause dominates the other, the latter being introduced by
one of the following (subordinating) conjunctions.

(119) Subordinating conjunctions

```
L / H
mi                `and, that' (Consecutive)
L        H
te ... pE⁴²        `if, when' (Conditional)
LL
maa               `that, as'
```

---

[42]   The three dots "..." indicate that material
appears between the separate parts of the conjunction; in
this case the entire clause appears between the two.

```
L  R
malang          `before, earlier'
L H       H
mEE ... (yE)    `when, as, while, at the time'
```

I discuss below conjunctions which combine with pronouns.

4.9.1 The consecutive conjunction

Two conjunctions combine with personal pronouns in some cases to form what seems to be a single word. One such combination is with the Consecutive conjunction.

(120)   Subject pronouns and the consecutive conjunction *mi*

Person	Sing	Plur
1st	*mi*	*ming*
2nd	*ma*	*mila*
3rd	*mbo*	*ma*

Since the tones of this conjunction vary with tense, tones are not indicated (see Chapter 6: Inflectional morphology, verbs). This conjunction does much more than string together sequences of clauses, as might be inferred from its name. In fact it is an all-purpose conjunction, a generally subordinating conjunction in most cases.

The form of the third person singular pronoun is of some interest in that it is not an easily analyzable combination of conjunction and pronoun, as is the case with the other pronouns. It is *mbo* rather than some simple additive function of *mi* + *o*. In that it is a nasal-compound-stop rather than a simple stop parallels its use as an emphatic marker. *Mi* can also be used to

emphasize a following clause. For example, to underscore

the fact that one is really leaving one would not say, *i*

kuE, or even *ya i kuE,* but rather *mi kuE* (see discussion

of personal (and emphatic) pronouns above in 4.2.1

Personal Pronouns).

I give below some examples of *mi* with several

different pronouns and nouns following.

(121) Some examples of the consecutive conjunction

```
H    L  LH   L     H   LL  H    H      H  H  H L    L H
mi bElOO mal mbo kua keng-keng mbo kO dimul peu
Conj rat leave Conj-3ps go Idph Conj-3ps go tell pig
'And the rat left in a rush to go tell the pig.'
H   L    H  LL   H   H  LL    H   L  LH   F
mi tungndo saa ndu mbo pial ndu kpokpoo pO
Conj dog   catch it Conj-3ps break it skull Idph
'And then dog caught it and crushed its skull.'
```

This conjunction is also used as a general

subordinating conjunction, for example, after such verbs

as 'want', make', 'believe', etc.

(122) *mi* as a subordinating conjunction

```
L  R      F    L  L H  H   LL
yiyangndang la tosa ma nyau
thoughts    Pro make Conj-2ps thin
'Preoccupations caused you to waste away.'
H  H     H   L  LL
dimul ndu mbo kuE
tell  him Conj-3ps go
'Tell him that he should go!'
```

A limited number of verbal inflections are allowed in

clauses beginning with this conjunction. For example,

there is no Negative after *mi* (see Chapter 6: Inflectional

morphology, verbs).

4.9.2 The conditional conjunction

The phonological changes are less drastic with regard to combinations of the conditional morpheme *te...pE* L H with the subject pronouns.

(123)   Subject pronouns and the conditional
          conjunction

Person	Sing	Plur
1st	H *ti*	L *teng*
2nd	L *ta*	L L *tela*
3rd	L *to*	L *ta*

The meaning of the conditional conjunction is something like, 'if, when'. It is likely that the first part of the conjunction is related to *teleng* (Stem = *te*) 'time, period', as is suggested by the last example below.

(124) Some examples of the conditional

```
L  L  LL  H  H  H H  H  H L   HH H  H
te a kuE pE, a tofa num o hOl saatata
Cond you go Cond, you look-at you Prep eye Idph
'If you go, just look straight ahead.'
L  L  HH     F H   H  L  LL  R    HHH H  HH
te o woong nyElang pE, o hEEnung hiOOdOlOO
Cond he put-on clothes Cond, he draw-Mid Idph
'If he puts on clothes, he sucks in his stomach.'
H  H   H  H H    L  L H  L  H   LHH    H  H  H
teleng o teleng ng sOla ba pE, puEEng ya le pa,
time Dist time you get hand Cond, forget me Neg Idph
'From time to time if you get money, don't forget,
H  LL L  LLL H  L  LHH
le paawa ciEiyo, a tuei?
for payment house, you hear
about the rent, understand?
```

It is not always necessary to use the *te* particle; a clause-final *pE* is sufficient to indicate conditionality.

(125) Conditional without *te*

```
L   L H H     H  F    H HH L  L  H LL  H H  L  HHH  HH  H
```
o celulul ndu ning fulii, a ce pE aa bulu ma kuEEndoo ni
he fat-Ben him PP Idph, you see Cond Conj horn Ass
Koindu Foc
'He got so fat, if you see him, he looks like Koindu
bread.'[43]

```
    L  R     HH LHH  H  LL L   L  H  H  L     H
```
o cEng suisioo pE, poola ndO la kandang te
Pro get-up shit Cond, shit his Pro dam Neg
'When he starts shitting, his shit can't be stopped.'

When conditional clauses are negated, the Negative

particle replaces *pE*.

(126) Negated conditionals

```
   L  L  L  R      L L  H  L   H  H   H  H
```
o co hindOng, te o we ma nyindi ndu le
it Aux swell-Mid, Cond Pro Aux Cong-2ps press it Neg
'It will swell if you don't compress it.'
```
L  L  HH  L  L R    L  L  HH  H
```
o co naa bengulOng te ng kue le
he Aux us shut-Ben-Mid Neg we go Neg
'He won't say anything if we go.'

4.9.3 Other conjunctions

Several prepositions can take full-clause

complements, but when they do, the clause must be preceded

by the general subordinating conjunction *mi*. In the

first example below there is no need for a conjunction for

the verb is infinitive in form and has no surface subject;

le (Prep) is not followed by *mi* (Conj). In the second

example there is a surface subject *nyOO* and the

conjunction *mi* after *le* .

---

[43] There is a type of bread baked in Koindu, Sierra
Leone, that is quite plump and slightly curved like an
animal's horn.

(127) Conjunction *mi* after *le*

```
L   LL  L       H   L   H   LH   L  LH
```
o kiisang fangga le nyOO tosaa
he doubt a-lot for thing do
'He doubts himself too much to do anything.'
```
H   L   LH   LL  F    H  L  H   L   H L   L   LL   LL    F  H
```
le mi nyOO kaanung wana o la-bolo, i co i kala kpoke
for Conj thing hawk-Mid person from throat, it Cop it
hard truly
'For a thing to be hawked and spat from a throat is
difficult.'

We see here again the "general-purpose" nature of the
conjunction *mi*.

4.10   Particles

Particles are words that have little in the way of
semantic content; they function to signal grammatical
relations or other pragmatic features. Typically they
consist of a phonological structure of CV or less and show
some fusion with nearby words. They have no morphology
and fall into no regular paradigm. They are highly
restricted in their syntax, usually appearing in only one
environment. Some examples should make clear the type of
"word" that falls into this category.

4.10.1   Obligatory particles

The negative particle appears clause finally,
functioning together with changes on the finite part of
the verb to signal changes in polarity (see 4.4.6 Negative
le and Chapter 5: Inflectional morphology, verbs). The

negative particle has the allomorph *te* after consonants; otherwise it is *le*.

(128) Negative particle

```
H   L H H   LH   H   H H   H
o taselandOO, i sina le
Prep first     I know Neg
'At the beginning, I didn't know.'
HL  H  H L   HH R    H  L L  LH H   L R
hoo co bOlO cuanang te, o nO koowang lening
this Cop bag take  Neg  it have medicine inside
'This bag cannot be taken, it has medicine inside.'
```

As with many languages of the world, the interrogative marker is a final suffix or clitic on the (finite) verb (Bybee 1985:175). The question particle *yE* occurs after the first finite verb and is used in conjunction with question words to signal questions. It has allomorphs of *yE*, *lE*, and *nyjE*.

(129) The question particle

```
LL   HH HH   L H   H
vEE lEElOO dimi yE?
what clock say Quest
'What time is it?'
LH H H   HH H    L   H   H L H
vEEnE o lookul [lE] ya ndu sOlal?
how  he manage Quest me it get
'How did he manage to get it for me?
LH  L  H       L   L L  H L
yEE ng hing [nyjE] tosa nanung?
what you come Quest do  here
'What have you come to do here?'
```

There is also a pluralizing suffix that is discussed above in 4.1.3 Names. Suffixed to a proper name it means 'and that person's people, friends, or entourage'. I give an additional example below.

(130) A pluralizing morpheme for proper names, *-aa HL*

```
L   L    H HH   H  LL HL   L    L
```
o sanggalial la saa-aa fangga
Pro praise-Pl me Nam-Pl a-lot
'He praised over and over Saa and others for me.'

Particles which are not obligatory are discussed in the

following section.

4.10.2 Optional particles

The suffix *-nE* is optionally attached to the end of

interrogative words.

(131) Interrogative suffix *-nE*

```
L H                      L H  H
```
nEE   'who'   *nEEnE*   'who'
```
L L H                    L L H  H
```
kuEE   'where'   *kuEEnE*   'where'
```
L H   H  F    H    L F    L  LL LL   H
```
vEE-nE cOmndang malang ng fuuluu long?
how Prt counting before you reach there
'How many counts before you reach there?'

The politeness particle *-wO* can be optionally

attached to imperative and hortative forms to soften them

or to make them more polite. It has allomorphs of *-ndO*

and *-lO*.

(132) Politneness particle *-wO*

```
H                   H     H
```
hung   *hung ndO*
'Come!'   'Come (polite)!'
```
L   R      H    H  L   H
```
o hung [ndO] ko ng kO
he come Prt just we go
'Let him come [then] we [will] go.'

There is a final particle *-o* which serves a number of

different functions. It is heard most commonly at the end

of greetings to make them more enthusiastic or friendly.

This particle is at the least an areal one for it is found in nearby but unrelated languages such as Liberian English (Singler 1986) and Mende (Innes 1969:121, as referenced in Singler 1986:10)[44]. Another Kisi particle with comparable function is -ale.

(133) Friendliness particles -o and -ale

H L   L H L
isE laosE   'greetings (sg/pl)'[45]
L LH   L H LH
isEo lawosEo   'spirited greetings (sg/pl)
L HL   L HL H
idii   idiiyo   'goodbye'/'spirited goodbye'

H L H L   L HL H L
isE-ale   idii-ale
greetings-Prt   greetings-Prt
'spirited greetings'   'spirited goodbye'
L LL F   H L
ng ciikang-ale
we meet-Prt   '(Until) we meet (again)'

The particle -o has many other functions, as is exemplified below, and generally serves to emphasize or contrast a word or entire statement. The particle has allomorphs of -yo, -wo, and -ndo.

---

[44] Singler 1986 contains a full discussion of a comparable particle throughout West Africa and even elsewhere in the world. His discussion strongly intimates that the particle is an areal, if not a universal phenomenon.

[45] The etymology of this greeting is not clear, but it may be related to the verb sE '(for day) to break, (for the sun) to come out or appear'. This seems likely in that other time words are used for salutations (cf. idii 'day; goodbye') and i intial forms are common for time words (cf., e.g., icOl 'night').

(134) Emphatic particle -o

```
H  H    L  LL HH H  L       H
```
lelang, o fuuluu o num-[ndo]
therefore, it reach Prep you-Prt
`And now (therefore), it's up to you.'
```
L   HL    L  H   L L   H   L
```
mi kEE dyula toma-lang o
Conj-1ps refuse name society-NCM Prt
`And I absolutely refused the society name.'

Another particle is the calling or vocative particle -e;

it replaces the final vowel of names with final front

vowels lower than e, i.e., E and a.   The High tone of the

particle replaces the final tone.

(135) Vocative particle -e

```
L   L                L   H
```
kumba   ->   *kumbe*
```
L L                  L H
```
saa   ->   *sae*

The particle is used primarily for calling small children,

and the final vowel can be prolonged expressively.

There is an associative morpheme *ma* which is used in

forming compounds involving proper nouns.

(136) Associative marker *ma*

```
L      L  L  LL  H
```
lEng-nde-ma-kisi-leng   `the Kisi area'
land-NCP-Assoc-Nam-NCM
```
R   H  L   L  L  H
```
bEl-ta-ma-kpandi-lang   `Bandi pineapple'
pineapple-NCP-Assoc-Bandi-NCM
```
L   L H HH   LL   H H  L  HHH   H
```
a celulEi maa bulu-ma-kuEEndu
you fat   like horn-Assoc-Nam
`You are fat like Koindu bread (shaped like a horn).'

The morphosyntax of these constructions parallels that of

of other compounds with the addition of the associative

marker between the head and dependent element.

There are a number of different particles that appear clause finally in conjunction with intial subordinating conjunctions, e.g., *wa* with *naa*, *wO* with *mEE*. (See discussion of subordinating conjunctions in 4.9 Conjunctions above.)

4.11 Interjections

This group consists of words which are usually expressive in nature and therefore subject to a great deal of individual variation. One type of word that falls into this category is greetings and salutations.

(137) Greetings and salutations

```
H L    L H L
isE  lawosE          'hello, greetings (sg/pl)'
 H  H L L
(wO)nikEnE           'greetings'
   L L
mbaa                 'response to a salutation'[46]
L LH LH    L HL H L
idiiyoo  idiiyale    'good-bye'
 L  LL F     H L
ng ciikang (-ale)    'good-bye, we'll see you'
we meet       Prt
```

The two forms of 'good-bye' in the second example are based on the word *idii* 'day, morning' and the particles *-o* and *-ale*, discussed in the preceeding section.

The words for 'yes' and 'no' are probably subject to more individual and contextual variation than any other words. I give one rendition below.

---

[46] This word is used primarily in Guinea and is probably a borrowing from Malinke <u>mba</u> 'thank you, response to a salutation'.

(138) `Yes' and `no'

    L H
(?)E?E?   `no' (vowels can be nasalized)
L H F
EEE   `yes' (vowels can be nasalized)

What is crucial for these two words is their pitch

contours and the glottal stops for `no'. The segmental

material can be nasal or not nasal, the quality of the

vowel varies in height from [E] to [i], and duration is

not a significant factor. None of these factors is

relevant so long as: 1) if for `no' there is a sequence of

two abrupt vowels, first one with a Low and then one with

a High; 2) if for `yes' there is a rapid switch from a low

pitch to high and then a gradual falling tone.

There is also a tag particle (tones variable).

(139) The tag particle *nEE*

H L L H	**L L L L L H**
mbo hung, nEE	*o hing wO le, nEE*
Conj-he come, Tag	he come yet Neg, Tag
`He came, right?'	`He hasn't come yet, has he?'

L LL HL   HH HH H R H   F
o puusiang faufau le bEllong, nE?
he wave-arms all-over for palm-nuts, Tag
`He waved his hands for the palm nuts, didn't he?

Other expressions that lubricate social interaction are

given below.

(140) Politness expressions

H H H
baleka   `thank you'
H H H   H H H
nuwali / niwali   `thank you'
H H H H
woniwali   `congratulations'

L H H
hakato   'excuse me, as in asking permission'[47]
L **
yandii   'please'

Another type of word in this category expresses the emotion of the speaker, exclamations of surprise, disgust, happiness, etc. I have given as a gloss the emotion expressed by each exclamation.

(141) Exclamations

L
bɔ   'elation at remembering something'
LL HH
EEhEE   'realization (vowels can be nasalized)'
LLL
eee   'disappointment'
H
ko   'doubt or uncertainty'
H / F
kpa   'irritation, doubt, lack of surety, hesitation'
H L
kpo(u) 'surprise or astonishment'

In addition there are the onomatapoeic *kong-kong* used to announce one's arrival (imitating the knock on the door), the prolonged sibilant *s-s-s-s* used to attract someone's attention[48], and *ngOOng* used by children to tease each other. Finally, a high-pitched bilabial nasal *m H+*, usually accompanied by an extended object, means 'Here, take this (the object)'.

---

[47] It is likely this word is borrowed from a Mande language. Informants said the word was variously Mende, Gbandi, and Mandingo. The words for 'thank you' were also reported as being borrowed.

[48] This calling technique is in use in other parts of Africa as well as in the caribbean (see V.S. Naipul's A house for Mr. Biswas).

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Chapter 5: Inflectional Morphology, Nouns

5.1 What is a noun class system?

In this section I give a brief explanation of what it means for a language to have a noun class system. I discuss how noun class systems operate within Niger-Kordofanian-Congo (NKC), especially within the group of languages most closely related to Kisi. I then give full exemplification of the way the system manifests itself in Kisi.

5.1.1 Definitional

A noun class system consists of an exhaustive division of all nouns in the language into a number of classes. Although this division need not register itself on the nouns themselves, it must do so on other classes of morphemes. Modifying elements, such as adjectives and demonstratives, typically show concord in noun class languages.

> A noun gender [= class] system may be regarded, then, as involving the interaction of two basic factors, classification and agreement, the two being in a relation of mutual determination, the gender being defined by the agreements and the agreements being determined by the genders.
>
> (Greenberg 1978:150)

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Class membership in Kisi is registered on nouns by means
of a suffix or "noun class marker" (NCM). The
characteristic pronoun for each class, the class's "noun
class pronoun" (NCP), will be used to designate each
class. For example, the animate singular class has as its
pronoun o I will refer to the class containing such nouns
as the "o class".

Among other NKC languages with fully operant noun
class systems, the division into noun classes has
generally been seen as having a semantic basis.

> The typical conclusion which is reached is that
> while all or most members of certain natural
> classes of entity may be placed in the same
> class (familiar examples are in the placement of
> trees in class 3/4[1] and fruits in class 5/6),
> the classes themselves have no overall semantic
> content, with the frequent exception of class
> 1/2.
>
> (Creider & Denny 1975:142)

The class 1/2 exception contains the singular and plural
of human beings, and occasionally the singular and plural
of all animate beings[2]. Crucial to the semantics of the

---

[1] Creider & Denny consider each singular-plural
pairing to be a single "class". In the way I am using the
word, "class" represents just one of the two members of
such a pairing.

[2] Creider & Denny use Guthrie's (1971) reconstructed
Proto-Bantu forms to see what semantic generalizations can
be made about the noun classes they reconstruct.

> Proto-Bantu noun prefixes realized a semantic
> system where each prefix was, in general,
> associated with a particular characteristic
> meaning ... we will be claiming that the bulk of
> the noun prefixes were associated with
> configurational or shape meanings.

proto-system is the shape or configuration of each class's members. Some of the configurational features Creider & Denny present, such as length and thinness, liquidity and roundness, as well as concepts such as animacy and plurality, will be important for a characterization of the noun classes of Kisi.

5.1.2 Noun class systems in related languages

Noun class systems represent the feature that has been used to isolate NKC languages as a genetic group, e.g., Westermann 1935. Though nearly all sub-groups show evidence of a noun class system, there is a wide range in the way the system is manifested. One of the six groups of NKC (Greenberg 1966) shows few traces of a noun class system. The other groups all contain at least some languages with fully operant systems.

Languages belonging to both Kru and (New) Benue-Congo (see Demuth et al. 1986:454) represent how far a system may decay, i.e., lose manifestations of its noun class system. In these languages the only trace of a noun class system is in initial vowel alternations, analyzed as representing remnants of prefixed noun class markers,

---

(Creider & Denny 1975:142)

They show that this basis for classification is not an
uncommon one, being found around the world in other
classifier systems, e.g., Toba (South America), Algonquian
(North America), and Sino-Tibetan.

e.g., Yoruba (Akingube 1985) and Grabo [Grebo] (Bing

1985)[3]. In both cases these vowel alternations appear

with only a few of the noun classes.

Fully operant systems, on the other hand, are the

rule in Benue-Congo, especially among the Bantu languages

(Hombert 1981). In Atlantic, the group of NKC to which

Kisi belongs, there are also many fully operant systems.

Nonetheless, in several languages within the group

considerable decay has occurred.

In several Atlantic languages the presence of a noun

class system is registered only in initial consonant

alternations. These alternations can be seen as eroded

prefixes, "an integral part of the noun class system"

(Sapir 1971:65). It is also true, however, that consonant

alternation may operate independently of the noun class

system, as in Basari, Konyagi, and Bedik (Sapir 1971:71).

In these languages the original grammatical motivation

for the alternation has been lost.

Other signs of decay in Atlantic can be seen in the

nearly complete decay of noun affixes which mark a noun's

membership in a particular noun class. In Wolof and

---

[3] Bing maintains that in Gbabo, a dialect of
Liberian Krahn, the concord element is no longer
morphological but rather phonological. This is a rare
instance of a language phonologizing a morphological
contrast, as opposed to the usual process of
morphologizing a phonological alternation (Hale 1973).
As will be seen below, Kisi has followed the same route in
a less dramatic fashion.

Serer-Non, two Northern Branch languages in Atlantic, only
initial consonant alternations on a few words register the
former presence of prefixes. Both Serer-Non and Wolof
have, however, have renewed their noun class systems with
suffixed elements, which exhibit the membership once
shown by prefixes (Greenberg 1977:99-100).

In general, however, Atlantic languages have fairly
straightforward prefixing systems, e.g., Fula, Sua.
Concord is shown on adjectives, possessives, numbers,
demonstratives, and pronouns. Kisi is exceptional within
Atlantic in that it suffixes rather than prefixes its noun
class markers.

5.1.3 The noun class system of Kisi

The noun class system of Kisi is the one part of the
language that has received linguistic attention, Samarin
1951, Berry 1959, Heydorn 1971, Johnson 1981. Generally
descriptive in their aims, these analysts have agreed on
the basic features of the system. The remarks below
expand on these analyses and diverge in only minor details
from the consensus findings.

Kisi nouns are divided into seven formally different
classes, the class of each noun being determined by
suffixes and the concordial elements suffixed to dependent
words. In the first column below I give the name by which
I will refer to each class, namely, by the class pronoun

for each class. In the second column are given
representative suffixes for each class (there is a great
deal of allomorphy[4]), and in the final column is a rough
semantic characterization.

(1) The noun classes of Kisi

Name	Suffix	Semantic characterization
o class	ᴴ -o	Sg of all animates, some objects
a class	ᴴ -a	Plural animates
le class	ᴴ -leng	Singular objects
la class	ᴴ -lang	Plural objects
i class	ᴴ -e	Singular, collective plants
ng class	ᴴ -ong	Plural, collective grains, etc.
ma class	ᴴ -ang	Liquids

The pairings are not quite so neat as the semantic
characterizations suggest. The o and a classes are often
paired, as are the le and la classes, but so also are the
o and la classes. The i class has some plurals in the ng
class and others in the la class. The ma class,
containing only liquids, is the smallest class and may
have singulars ('a drop of __') in the le class.

I give below a quantitative assessment of the
singular-plural pairings on the basis of an early
tabulation of Kisi nouns. In the first column I give the
singular class to which a noun belongs, and in the second

---

[4] See Childs 1985 for an autosegmental treatment of
the complex morphophonemics of the noun class system.

the noun's plural class. In the third column is given the percentage of total pairings (n = 913) each singular-plural pairing represents. For example, the first row shows the pairing of <u>o</u> class singulars with <u>la</u> class plurals. This pairing represents 43.4% of the total singular-plural pairings.

(2) Singular-plural pairings in Kisi

<u>Sing</u>	<u>Plur</u>	<u>%-age</u>	<u>N</u>
o	*la*	43.4	396
o	*a*	27.3	249
i	*ng*	15.3	141
le	*i*	4.3	39
le	*la*	3.2	30
le	*ma*	3.1	28
o	*i*	3.0	27
le	*ng*	0.3	3
		100.0	913

Note: I have include collectives and liquids in the plural column.

The display above shows that there is no neat pairing of noun classes in Kisi, as there is, for example, in many Bantu languages. Two of the three singular classes (<u>o</u> and <u>le</u>) have more than one plural class, and the third singular class (<u>i</u>) is also a plural (collective) class. Furthermore, three of the five plural classes (<u>ng</u>, <u>i</u>, and <u>la</u>) have singulars in more than one class. This sort of jumbling of noun class pairings probably represents the collapsing or evolution of an earlier system of tighter pairings. As discussed below, one likely source of

erosion is the phonological reduction of the noun class markers.

The next display illustrates the size of each class. In the first full column is the name of each class and in the second the percentage of the total number of nouns contained in that class. In the third column is the number of nouns represented by that percentage.

(3) The size of Kisi noun classes

	Class	%-age	N
Sing	o	36.8	672
	i	11.3	207
	le	5.5	100
Plur	la	23.4	426
	a	13.6	249
	ng	7.9	144
Liquid	ma	1.5	28
		100.0	1,826

The o class is far and away the larges class, containing singular animates, plants and trees, body parts, and many objects. The largest plural class, the la class, contains plural objects.

Now that we have considered the division of Kisi nouns into noun classes, we will turn to the operation of the concord system. Kisi dependent (governed) elements show concord by a suffix attached to the dependent element. The choice of one of the seven suffixes is determined by the head (governing) noun. Words showing

concord are adjectives, possessive and demonstrative adjectives, pronouns, and low numeral adjectives.

The order of elements with modified nouns is Noun Stem + Noun Class Pronoun (NCP) followed by Adjective Stem + Noun Class Marker (NCM)[5]. The exception to this pattern is nouns belonging to the o̱ class; the NCP does not appear after the Noun Stem. The sequence of elements for o̱ class nouns is Stem followed by Adj + NCM. Because the o̱ class is irregular in all comparable constructions, I will note the irregularity here and draw my examples, in most cases, from the six other classes in order to focus on the more widespread pattern.

(4) Adjectival concord

Class	Modified noun	Gloss
o̱	L L L HH H vEEng yuwEi-o woman' Stem Adj-NCM	'old venerated woman'
ma̱	L L L HH H mEng-ma yuwEi-ang Stem-NCP Adj-NCM	'old water'
la̱	H H L L HH H lEEng-la yuwEi-lang	'old cutlasses'
ng̱	R L L HH H bEl-ng yuwEi-ong	'old palm kernels'

Many of the forms presented in this section are somewhat idealized and undergo further phonological changes.

---

[5] I follow the practice of the Kisi Literacy Committee in Liberia of separating nouns from their modifiers, i.e., in considering such sequences to be two separate words.

Possessive adjectives follow exactly the same pattern, as do nouns when they possess other nouns.

(5)   Possessive constructions

<u>Class</u>   <u>Possessed noun</u>   <u>Gloss</u>

Nouns and possessive adjectives

ma	L L L H *mEng-ma nu-ang* Stem-NCP Poss-NCM	'my water'
la	H H L L H *lEEng-la nu-lang*	'my cutlasses'
ng	R L L H *bEl-ng nu-ong*	'my palm nuts'

Nouns possessing nouns

ma	L L LL H *mEng-ma saa-ang*	'Saa's water'
la	H H L LL H *lEEng-la saa-lang*	'Saa's cutlasses'
ng	R L LL H *bEl-ng saa-ong*	'Saa's palm nuts'

The order with respect to noun-noun compounds is slightly different from that for nouns possessing nouns and is discussed below (see also Chapter 7: Derivational morphology).

Demonstrative adjectives also show agreement with the nouns they modify, but the order of elements in such constructions is slightly different. With respect to the proximal adjectives, 'this', 'these', nouns do not change their form and the adjectives follow the nouns they modify.

(6) Proximal demonstrative adjectives showing concord

Class	Modified noun	Gloss
ma	L H F mEngndang mang Stem-NCM Demon-Prox	'this water'
la	H H H F lEEngndang lang	'these cutlasses'
ng	R H F bEllong mung	'these palm nuts'

Distal demonstrative adjectives show the same sort of agreement but cause a change in the form of the noun. The suffix is removed and the stem appears without any affix.

(7) Distal demonstrative adjectives showing concord

Class	Modified noun	Gloss
ma	L H mEng mang Stem Demon-Dist	'that water'
la	H H H lEEng lang	'those cutlasses'
ng	R H bEl mung	'those palm nuts'

Although it is difficult to identify a morpheme representing either the distal or proximal adjective, it is clear that the demonstrative adjectives show concord in the same way as other adjectives.

The final category which can be said to show concord is that of numeral adjectives. The sequence of elements for singular nouns with numerals, i.e., 'one ___', is Noun Stem with NCM followed by its respective NCP and the word for 'one'. There is no change in the word for 'one' as there is for the other low numeral adjectives.

(8) Numeral adjectives, `one'

Class	Modified noun	Gloss
o	L LH L L H *domaa o-pilE* Noun-NCM NCP-one	`one shirt'
le	H H H L L H *lEEngndeng le-pilE*	`one cutlass'
i	L LH L L H *bunggEi i-pilE*	`one portion'

For scme speakers the noun appears without its suffix

(NCM).

(9) Numeral adjectives, `one', without NCM

Class	Modified noun	Gloss
o	L L L H *sO o-pilE* Stem NCP one	`one fowl'
le	L L L L L H *siau le-pilE*	`one orange'
i	L H L L H *panggu i-pilE*	`one month'

In both of these constructions the o class is not

exceptional and follows the general pattern of the other

classes.

The changes for the numeral adjectives `two' and

`three' are shown below. The changes in the words for

`two' and `three' contrast with the lack of change in the

word for `one' shown above, and the words for `four' and

higher numbers. For the numeral adjectives `two' and

`three', there is no change in the modified noun, i.e., it

always appears with its suffixed NCM.

(10) Numeral adjectives, 'two' and 'three'

Class	Modified noun	Gloss
'two'		
a	LL H L LHH *nau-a a-ngiOOng*[6] Stem-NCM NCP-two	'two cows'
la	H L H L LH *salalang la-tiOng*	'two sacrifices'
ng	L R L LH *kEmbOng ng-muung*	'two palm kernels'
i	LLL LLH L LH *diOOmuei i-ngiing*	'two tongues'
ma	L LH L LLH *lumbiang ma-miOOng*	'two palm wines'
'three'		
a	LL H L LH *nau-a a-yaa* Stem-NCM NCP-two	'three cows'
la	L L H L LH *salalang la-yaa*	'three sacrifices'
ng	L H L LH *kEmbOng ng-nggaa*	'three palm kernels'
i	LLL LLH L LH *diOOmuei i-yaa*	'three tongues'
ma	L LH L LH *lumbiang ma-yaa*	'three palm wines'

As can be seen, the changes in the numeral adjectives are slight; the formal differences are further limited in the total number of forms for each word. There are five different forms for 'two' and only two for 'three'.

As can be seen the formal differences appear initially; it seems what little agreement is shown is prefixed and is preceded by an element which also shows

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[6]   The word for 'two (a class)" was also recorded as *niOng LH*. See the discussion of the negation of a class nouns below. The element that is prefixed before the noun stem in negative constructions is usually the noun class pronoun. In the case of a class nouns, it is variably a or *ng* (a homorganic nasal).

agreement, the class pronoun. It is in this way that Greenberg saw processes of renewal in the language family to which Kisi belongs. In this particular environment, we have the unusual development (for Kisi) of prefixes being renewed.

Before discussing the semantics of the Kisi noun class system, I will discuss several environments in which concord markers precede the nouns with which they are associated.

5.2 Prefixes and suffixes

We have seen thus far that the usual pattern for nouns and their markers is for the markers to be suffixed. In several places this affix is replaced or supplemented by its corresponding pronoun, prefixed to the noun. From a synchronic perspective these cases must be acknowledged as exceptions; diachronically they can be interpreted as remnants of an earlier prefixing system since this is the dominant pattern within the Atlantic Group and within NKC itself.

In an earlier paper (Childs 1983) I demonstrate the reasonableness of this scenario. I show that the present-day suffixing system has replaced an earlier prefixing system. Kisi, in fact, represents the most innovative language within Southern Branch of Atlantic in that no other language has developed a fully suffixing system. In

this section I present what in that earlier paper were called "prefixing remnants".

There are a number of different environments in which nouns appear with prefixed NCPs. For most classes these pronouns are formally different from the suffixed NCMs. We have already seen instances (numeral adjectives) where pronouns are prefixed to dependent elements. I list below the environments in which NCPs are prefixed to noun stems (without the usual NCM suffixed).

(11) Prefixing of NCPs to Noun Stems

1. Negated constructions
2. Comparative constructions
3. Some adpositional constructions
4. Some questions
5. Exclamations
6. Indefinite pronouns and time words
7. Non-finite verb forms

The environments listed above are listed in decreasingly obligatory order. For example, when nouns appear in negative constructions (1), they <u>always</u> appear with prefixed NCP (except the <u>o</u> class); on the other hand, only a few non-finite verb forms (7) appear with a prefixed NCP. There are parallels to this arrangement of items in other morphosyntactic environments. See the dicussion of numeral adjectives below.

The most common appearance of a stem with a prefixed marker is in negative constructions, where the noun is the item being negated, i.e., sentences of the type, 'It's not a __.' In the first column is the noun stem with its

suffix, in the second a negated sentence, and in the third a gloss of the sentence.

(12)   Negation of nouns

Stem-NCM	Negated Noun		Gloss
L H	L H H H H		
caleng	o co le-ca le	'It's not a pumpkin.'	
	Pro Cop NCP Stem Neg		
L L H	L H H H H H H		
boondong	o co ng-boondu le	'It's not a knuckle.'	
L L L H	L H H H H L H		
boosei	o co i-boosu le	'It's not an instrument.'	
L H	L H H H H H		
caa	o co a-caa le	'It's not maggots.'	

The o class is exceptional; no noun class pronoun appears before the item being negated.

(13) Negation of o class nouns

L H	L H H H		
ciO	o co cE le	'He's not a slave.'	
L L H	L H H L H		
bOlaa	o co bOla le	'It's not sister-in-law.'	

The a class (the other animate class) is also irregular in that it variably prefixes a homorganic nasal element (morpho-phonemically ng as represented below) instead of the expected pronoun a.

(14) Negation of a class nouns

L L H	L H H H H H		
sOOwa	o co a-sOO le	'It's not chickens.'	
	L H H H H H		
	o co ng-sOO le	'It's not chickens.'	

It is likely that this nasal element, appearing in the second example, is related to a similar element at the beginning of the (a class) numeral adjective 'two' ngiOOng.

A second place where nouns appear with prefixed pronouns obligatorily is after the comparative word *maa* LL 'like, as'.

(15)   Prefixed forms in *maa* LL constructions

```
L  LH        L   L H   LL  L    L  L
kisEi        o tulu maa i-kisa      'She became hot as pepper.'
             Pro hot as NCP pepper
L   H        L   +  +  +   LL   L   L
bOlteng      o fefele maa le-bOl   'She's light as a feather.'
L  LH        L   L   L   LL   L    L
nyumndang    o tingi maa ma-nyum       'She's black as night.'
L  LH            L   L H   LL   LL
peuwo        o celul maa peu       'She's fat as a pig.'
```

As shown by the last example, the o̲ class is once again irregular.

An environment in which prefixing takes place optionally is in adpositional phrases. The object of a preposition appears with its NCM suffix removed and with its NCP preceding it.

(16) Prefixed stems in adpositional phrases
     (optional)

```
L   H        H  H  H L  L   H  H  L  L
bolleng      mosillo o co ndu o le-bol     'She wears a hat.'
             hat   it Ccp her to NCP-head
L   L H          L  R  H  L   LL
kpelelang    a cang o la-kpele   'They rose from beds.'
L   LH           L  R  H   L L
kpeloo       o cang o kpele     'She rose from bed.'
```

The last example shows the irregularity of the o̲ class; although the noun 'bed' appears in its stem form without a suffix, as do nouns from the other class, it does not prefix its pronoun.

It is usually the case that nouns in adpositional phrases appear in their full form. In the first example

below, we see in the first adpositional phrase that the

object (*1EmbOO* 'trousers') appears with its suffix (Stem

= *1EmbE*) but in the second phrase (also underlined), the

o͟ class noun (*baa* 'hand') appears as an isolated stem

(*ba*).

> (17) Nouns with suffixes in adpositional phrases
>
> H H L L LH H L LH R H L H
> *i co wO solio o 1EmbOO ning a ba ni*
> I Cop still remove Prep trousers Post Prep hand Focus
> 'I am still removing it from my trousers with my hand.'
>
> L R LL H L LH
> *o sim ciEyo ikei*   (Stem = *ciEi* 'house')
> she stand house near
> 'She stood next to the house.'
>
> L L H L H H LLH
> *o kelu yOmndo a cuei*   (Stem = *cu* 'axe')
> she cut wood with axe
> 'She cut wood with the axe.'

As with the prefixation of pronouns in adpositional

phrases, the prefixing of pronouns in the other

environments listed above is optional. I give below

examples of prefixation in other environments.

> (18) Prefixing in emphatic statements
>
> H L H L H
> *mbo tul ya yE-leng*   'She hated me.'
> Conj-she bear me hate-NCM
>
> H L H L L
> *mbo tul ya le-yE*   'She really hated me.'
> Conj-she bear me NCP-hate
>
> H H H
> *numbo tum*   'You're an ass!'
> you-Emph Stem

Constructions employing the indefinite word *kEkE* 'any'

also feature prefixing probably on analogy with adjectival

constructions.

(19) Prefixing in *kEkE* constructions

L H L
o-kEkE   'anyone, anything (o̲ class)'
L H L
ma-kEkE   'any liquid (m̲a̲ class)'
L H L
i-kEkE   'anything (i̲ class)'

A set of time words may also show remnants of prefixing.

(20) Possible prefixing in time words

L L
icOl   'at night, during the night'
L LH
idii   'morning, day'
L L HL
ipalaa   'afternoon, during the afternoon'

The noun class pronoun for the i̲ class is *i L*, but it is not clear that the initial element in these time words is that pronoun. It may be a preposition unique to time words because all the time words above have forms ending in the suffix *-leng*, belonging to a different noun class, the l̲e̲ class, e.g., *diileng* 'morning'.

One more environment in which nouns appear with prefixed pronouns is reported by Heydorn.

(21) Prefixing in questions

LL H   H L H L L LL   H H
dio-lang   *vE n nO yE la-dio kpEkpE*
Stem-NCM   Q you have Prt NCP-Stem all
              'What are all your names?'
                          (Heydorn 1970:214)

Heydorn's data come from fieldwork he performed in the Bolahun area of Liberia during the 1930's. In my own fieldwork I was unable to elicit such prefixed forms.

There are also several environments in which all noun stems appear with neither suffix nor prefix. In the exchange of riddles, usually an activity restricted to young boys, nouns appear as isolated stems.

(22) Truncated nouns in riddles and proverbs

```
L  H  H   L  H  H
cangullo  cangulla                    'catfish'
L    H   L.L H  H  H  H  H
canggul siEla o ba co le
'The catfish doesn't slip on his hands.'  (Riddle
question)
L  L H H   L  H
dumbuei  dumbong                       'roots'
L  L   H H  H
dumbu waawaa            'the most compact roots' (Riddle
                         answer)
LL  L H
kaalaa     'love'
LL L  L L HH  H L  HH L   L   L  H
kaala sEnEi sina 100mi syangga le⁷
```

kaala sEnEi sina 100mi syangga le[7]
love new know mucus red   Neg
'New love doesn't recognize red mucus (is blind).'

This practice is parallel to that found in Swahili proverbs and riddles (many examples in Abudu 1978), where both nouns and even verbs often appear in abbreviated forms.

Some nouns used as locatives have no noun class markers. These might be considered adpositionless phrases. In the first sentence, the form of 'ground' with its suffix is lEngndo. In the second sentence the locative is yondo (from yondoo 'forest, woods').

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⁷   In the case of the NCM on 'love', the NCM should appear after the adjective 'new'. The phrase should be kaala sEnEiyo.

(23) Adpositionless nouns used as locatives

```
L   LH  R  H    L    H L  H
```
o tiu bEllong lEng nanu sO
she spread palm-nuts ground here Idph
'She scattered the palm nuts all over here.'
```
L   LL HH  L  HH  L  L   HH
```
o viivii yambEi yondo kpou
she throw cassava forest all
'He threw all the cassava into the forest.'

A final environment in which isolated stems appear is in folk tales. This use might be compared to the expressive use of truncated forms in emphatic constructions and in riddles. For example, the word for a small rat is *tombosiO;* in folk tales he appears as *tombosE* 'Tombose'[8].

That so many different special types of discourse feature the truncated noun forms is significant and may indeed indicate something about the way the language is evolving. Here we find special discourse inducing or at least providing the materials for morphosyntactic change. I mentioned above how ideophones, a particularly salient component of the language's expressive resources, may also be important for language change.

Despite there being some instances of NCPs being prefixed to noun stems, and for some stems to appear in isolated form, the overwhelmingly dominant pattern is for concord elements to be suffixed. The exceptions to this pattern in some cases likely represent an earlier state of

---

[8] Professor Greenberg [p.c.] has suggested that some of the changes in prefixing and suffixing systems may be due to the differential use of nouns with affixes in folk tales.

Kisi when, like its closest relations, it followed a predominantly prefixing pattern.

5.3   The semantics of Kisi noun classes

As mentioned earlier, the noun class system of Kisi is a reflex of an earlier system which has undergone considerable erosion. This fact is reflected in the forms as well as in the semantics of the system. I look below first at the singular-plural pairings to evaluate if any semantic cohesiveness can be discerned. Each singular-plural pairing may represent an earlier state of the system before formal collapse of several classes took place, that is, for example, before nouns from one class had plurals in more than one other class. Creider and Denny (1975) point out that this sort of singular-plural pairing can be reconstructed; they further suggest that the semantic basis for each original pairing was based on configurational meanings.

After considering the meanings of the singular-plural pairings, I look at the semantics of each class individually. In some cases it is possible to assign fairly narrow meanings to some pairings and individual classes, but the overall situation is still a rather messy one.

5.3.1 The semantics of singular-plural pairings

I list below singular-plural pairings in increasing order of size. (I reserve for later treatment pairings which have five or less members; they comprise less than 0.3% of the total pairings.)

(24) Singular-plural pairings in increasing order of size

Sg/pl	%-age	N
o/i	3.0	27
le/ma	3.1	28
le/la	3.2	30
le/i	4.3	39
i/ng	15.4	141
o/a	27.3	249
o/la	43.4	396
	97.7%	910

The first pairing listed above comprises primarily trees and plants. Typical members are given below.

(25) Representative members of the o/i pairing

L H L H		
yOmndo yOmnde		'tree (generic), wood'
LL H LL H		
bEuwo bEuwe		'a species of tree'
L LH L LHH		
kpondoo kponduei		'dead tree'

This pairing contains fifteen different species of tree, eight different plants, many of them tree-like, two different kinds of woody plants, as well as several types of fig tree and mushroom.

Several pairings do not fit the tree-like configurational meaning characterizing this class, namely, 'steam', 'cooked rice', and 'a type of sore'.

The pairing represented by the <u>le</u> and <u>ma</u> classes is relatively straightforward in its semantics. It contains two types of entities: 1) liquids and juicy plants; 2) sharp or pointed objects.

(26) Representative members of the <u>le</u>/<u>ma</u> pairing

Liquids:	L H *mEngdeng*	L H *mEngndang*	'water'
	H HL H *siauleng*	H HL H *siauwang*	'orange'
Sharp objects:	LL H *sEileng*	LL H *sEiyang*	'porcupine quill'
	LL L H *siEndileng*	LL LH *siEndiang*	'needle'

Also found in this pairing are nouns with more remote connections to liquids (and pointed objects): 'vein', 'soap', 'salt', 'soot', 'marrow', 'river pebbles', 'the organ producing the electric discharge of an (electric) eel'.

The <u>le</u> part of the <u>le</u>/<u>ma</u> pairing is not nearly so productive for liquids as it is for the sharp, pointed objects. Informants were reluctant to admit, for example, that *mEngndeng* is the singular for *mEngndang* without some probing and encouragement. The <u>ma</u> class form was always given first. This difference in productivity suggests that liquids and sharp, pointed objects once belonged to different classes, with <u>ma</u> liquids not having 'singulars'. Their separate membership has since been erased by phonological erosion, and they are no longer formally different.

The _le_ class, although regularly the singular for many objects, has acquired a meaning of simple singularity or even diminutiveness. This development parallels the situation in Swahili and other Bantu languages. The _ki/vi_ pairing in Swahili contains many objects, and the _ki_ class also represents the diminutive class. The _le_ class in Kisi may be developing the same association; this hypothesis certainly is plausible on the basis of evidence from the liquids, where the _le_ part of the pairing represents 'a single drop' and represents an innovation. The example below illustrates that the association of _le_ with a diminutive meaning is a productive one. The regular forms for 'rice' are given first and then a diminutivized form in the sentence.

(27) The productivity of the _le_ class as diminutive

```
H  HH    H  HHH
mOmOO  mOmuEi         'rice' (o and i classes)
L  LL H   H  H H  H  L  H   H  L  H    L   HHH
o ciilul la mOmO-le ni-le pOmbO-leng dil mEEu
he finish me rice-NCP my-NCP little-NCM eat completely
   'He finished eating all of the little rice I had.'
```

The class to which the form for 'rice' in the sentence above belongs is the _le_ class, as evidenced by the noun class pronoun _le_ and the noun class marker _-leng_. There are also the diminutives below.

(28) Human diminutives

```
LL H                        L H
cualeng 'only girl child'   poleng 'only boy child'
LLH                         LH
cuaa     'girl, woman'      poo    'boy, man'
```

A third pairing is that of the le and la classes, some

representative members of which are given below.

(29)   Nouns from the le/la pairing

     L   H   L   H
hOlteng   hOltang   'eye'
     L LL H   L LL H
yangOOleng   yangOOlang   'trap'
    LL H   LL H
cooleng   coolang   'lie'

It is much more difficult to establish a semantic

characterization for this pairing. One must identify

several subgroups.

(30)   Semantic subgroups to the le/la pairing

1. Body parts, e.g., 'eye', 'ear', 'brain',
'buttocks'.

2. Tools or utensils, e.g., 'animal trap, 'umbrella',
'bellows', 'awl'.

3. Human acts (often derived from verbs), e.g.,
'lie', 'prayer', 'hatred', 'taboo', 'circumcision'.

There are other nouns, belonging to other pairings, that

possess the same semantic characterizations. Body parts

are found in pairings o/la, i/ng, and le/i. Tools,

utensils, and instruments are found in o/la and i/ng. The

le class is also used productively to form abstractions,

either from nouns or verbs. It is likely that the third

semantic subgroup above, 'Human acts', first acquired a

"singular" meaning via the abstraction association, and

then the word was pluralized (see Chapter 7: Derivational

morphology).

A fourth semantic subgroup of the le/la pairing, not given above, contains collective nouns. Belonging to this pairing are such things as 'ashes', 'dirt', and 'human waste'. 'Lightning' and 'feather' (a body part?) also belong to this group.

The next most plentiful pairing has greater semantic cohesiveness.

(31) Representative nouns from the le/i pairing

LL H H   LL   HHH
puunduleng   puunduei   'root (generic)'
L   H   L   H
falleng   falle   'woof thread'
LL L H   LL LLH
diOmuleng   diOmuei   'tongue'

Some further semantic subgrouping is possible but a more general characterization is a configurational one: 'long and thin, string-like'.

(32) Semantic subgroups to le/i pairing

1. Root or vine-like crops, e.g., 'root', 'cassava', 'pumpkin', 'yam', 'sweet potato'.

2. String-like objects, e.g., 'woof thread', 'warp thread', 'climbing belt', palm leaf fiber'.

3. Body parts, e.g., 'tongue', 'skin, back', 'penis', 'tail', 'hair', 'beard', 'navel'.

With little difficulty we can see all the nouns above as being 'long and thin' or 'string-like'. The one exception is the word for 'navel', but it is likely the word also refers to umbilical cord. A fair number of nouns, however, do not fit this characterization, e.g., 'sand', 'nest', 'dry season'.

Nouns from the i/ng pairing represent one of the three largest groups, and the group possesses little in the way of immediately apparent semantic cohesiveness.

(33)   Representative nouns from the i/ng pairing

LH	H	LH	H	
cOOngnde		cOOngndong		'Guinea corn, a grain'
L LH		L R		
kpasEi		kpasang		'spur of a cock, sixth finger'
H H		H H		
cEngnde		cEngndong		'cymbals'

Some possible subgroups are given below.

(34)   Semantic subgroups for the i/ng pairing

1. Grains, seeds, and beans, e.g., 'Guinea corn', millet, different types of seeds, rice, and beans.

2. Body parts, e.g., 'spur', 'kidney', 'tooth', 'foot', 'lip', 'vagina'.

3. Musical instruments, e.g., 'cymbals', 'drums', 'xylophone', 'bell'.

4. Metals, e.g., 'iron money', 'iron', 'money', 'gold', 'silver'.

5. Diseases, e.g., 'common cold', 'dishcloth (a skin disease)', 'crawcraw (a type of scabies)'.

6. Human activities or qualities, e.g., 'sorrow', 'song', 'friendship', 'pawning'.

7. Plant-related, e.g., 'an edible leaf', 'palm tree', 'tree stump', 'thorn'.

There are also some liquids that belong to this pairing: 'pus', 'mucous', 'sweat'; some utensils: 'mortar', 'axe', 'pot', 'pipe'.   In addition there is the heterogeneous collection of 'portion', 'farm', 'medicine', and 'nest of a large rat'.

The first semantic subgroup, 'grains, etc.', is far and away the largest. It is thus possible that the shape of such objects forms the semantic core for the group. Some of the body parts can be construed as possessing a small, round shape, e.g, 'kidney', as can be some of the musical instruments, e.g., 'bell'. If the liquids and metals can be viewed as appearing in drops or small pieces and diseases can be construed as taking such a form, the first five subgroups form a semantic whole. With some imagination, then, we can see the _i/ng_ pairing as containing objects of a small, round shape. This interpretation is also supporting by evidence from borrowings. The word for 'button' is given below.

(35) Borrowings into the _i/ng_ pairing

```
HH LH H    HH LH H
bOOtiiye  bOOtiiyong      'button'
L  HH L     H  L  HH  HH LH H  H
o heenung ya mi wou bOOtiiye le
he draw-in-stomach me Conj-1ps don button Neg
'He shoud suck in his stomach so I can fasten the
button.'
```

The second largest pairing is that composed of _o_ and _a_ class nouns. This pairing contains virtually all animate beings (see below for exceptions).

(36) Some representative nouns from the _o/a_ pairing

```
LL H      LL H
kEuwo   kEuwa            'snake'
H LH     H LH
buboo   bubua            'pig'
H   H  H  HH    H   H  H  HH
fOngOfOngOO  fOngOfOngua      'hornbill, a bird'
```

Also included in this pairing are nouns formed from the productive suffix *-nOO*, which usually denotes a person associated with the activity represented by the stem. The second example is a borrowing and clearly show the process at work.

(37) Some nouns with the *-nOO* suffix

```
 H   H HH    H  HH
mEkpEnOO  mEkpia        `albino'
 L HL LH    L HL H
sukuunOO  sukuuwa       `student'
```

All nouns belonging to this pairing, with suffixes of either *-o* or *-nOO*, possess the feature [animate], and it is this feature that characterizes the pairing.

The largest group represents the pairing of <u>o</u> and <u>la</u> nouns.

(38) Some representative nouns from the <u>o</u>/<u>la</u> pairing

```
 H HH     H  H H
buloo   bululang        `albino'
 L  H    L  H
billo   biltang         `medicinal leaf'
 L HH    L H H
bOtaa   bOtalang        `fist'
```

Below I give some possible semantic subgroups.

(39) Semantic subgroups for <u>o</u>/<u>la</u> pairing

1. Tools, instruments, utensils, e.g., `horn', `cup', `calabash', `musical rattle', `bow'.

2. Body parts, e.g., `fist', `back of an animal', `lower abdomen', `chin', `heart', `goiter'.

3. Plant related items, e.g., `medicinal leaf', `edible leaf', `seed', `corn cob'.

4. Natural areas, e.g., `forest', `swamp', `area', `part of swamp'.

5. Structures, e.g., 'house', 'door', 'eaves',
'attic'.

6. Abstractions, e.g., 'character', 'penury',
'legacy'.

7. Miscellaneous, e.g., 'group', 'bread', 'soap',
'dandruff'.

No semantic core can be posited for this group. There is
phonological evidence (see discussion of merging of ta and
la classes in Chapter 3: Phonology) that the la class
represents the merger of at least two earlier classes, and
it is likely the same can be said of the o class. The
pairing represents the classes into which borrowed (non-
liquid) inanimates are placed.

(40)   Borrowings into the o/la pairing

H HH   H H H
bEkio   bEkilang   'bag (< Eng. 'bag')'
L HH H   L HH H
bileeyo   bileelang   'a round basket of cane or
                                   piassava palm' (< Krio
                                   'blai' < Port 'balaio')

It thus seems possible to assign at least the feature
[inanimate] to this pairing.

In addition to the pairings discussed above, there
are several pairings with just a few members (less than
five pairs). For example, a number of liquids (ma class)
have their singulars in the o class.

(41) Liquids with singulars in the o class

LL H   LL H
wauwo   wauwang   'oil palm'
L HH   L HH
lumbOO   lumbiang   'piassava (wine) palm'
LL H   LL H
coowo   coowang   'a plant with medicinal uses'

Because all of these liquids are also plants and trees, and both plants and trees have singulars in the o class it is likely this pairing originally had an o class 'tree' singular. In fact the word for 'piassava palm wine', whose plural is identical to the word for 'piassava palm', has a "singular" in the le class, *lumbEleng* 'a drop of palm wine'. The o class singulars, then, clearly appear by analogy with the tree-like members of the o class. These facts underscore the vitality of the "liquid-ness" of the ma class in opposition to whatever class its members are paired with, i.e., its corresponding singular.

Another minor pairing is that of le and o, the former representing the singular and the latter the collective.

(42) Nouns in the le/o pairing

H H	H H	
yOO	*yOleng*	'a type of edible green'
L L L H	L L L H	
soondio	*soondileng*	'red berries'
H L H H	H R H	
fondoloo	*fondolteng*	'a type of green'
L L H	L L H	
cEnggio	*cEnggileng*	'elephant grass, sugar cane'

The last two nouns also have plurals in the la class, respectively, *fondololang* and *cEnggilang*, and the last has a counterpart in the ma class when it represents 'cane juice', a distillate of crushed sugar cane, *cEnggiang*.

No generalizations are immediately available for the other minor pairings given below.

(43)   Nouns from the o/ng pairing

HHH   HHH
cioo   cioong   'town'
LL   LH   LL   R
tEEnggoo   tEEnggong   'hole in the ground'
HH L   HH H   HH L   HH H
kiibOnggiiyo   kiibOnggiiyong   'tomato' (< Mende?)

Nouns from the le/ng pairing

LL   H   LL   H
yuengndeng   yuengndong   'pimple'
L L H   H   L L H   H
kilamangndeng   kilamangndong   'musical instrument'[9]

In summary, we have been able, however, to reach

generalizations about the pairings given below.

(44)   Semantic generalizations by pairings

o/i   trees, tall and thick, woody
le/ma   1. liquids
           2. sharp and pointed objects
le/la   inanimates
le/i   long and thin, string-like
i/ng   small and round
o/a   animates
o/la   inanimates, default class for borrowings

As has been suggested above, many of these generalizations

rely on configurational components in line with the

configurational characterizations Creider and Denny (1975)

posited for Proto-Bantu. Besides configurational

features, several other features are important to the

system, [animacy], [singular/plural], and possibly

[collective].

---

[9] It should be noted that there is an alternative
form *kilamangnde LLHH*. This form would locate at least
two of the forms for this noun in the more regular *i/ng*
pairing. The *le* class form may be the diminutive (see
discussion above).

5.3.2 *Semantics of individual classes*

In addition to the semantic characterizations of the pairings, it is possible to characterize the individual classes, some in ways that have not been mentioned yet. I give a summary below.

(45) *Semantic generalizations by class*

o class   *Singular*
            a. all animates[10]
            b. trees and plants
            c. many instruments, tools, and utensils
            d. some body parts
      Collective: some collective nouns
      Liquid: a few liquids
      Abstract: some abstract nouns

i class   *Singular*
            a. most grains
            b. all language names
            c. some body parts
      Plural
            a. long and thin or string-like objects
            b. most trees
      Collective: some collectives
      Abstract: some abstractions

le class   *Singular*
            a. many objects, utensils, tools
            b. diminutives
            c. some body parts
      Liquids: some liquid "singulars"
      Abstract: most abstractions

ma class   *Plural: sharp, pointed objects*
      Liquids: all liquids and juicy plants

There are some exceptions to the association of the o/a classes with animacy.

```
L    HH H      L   HH H
kEnyEEleng  kEnyEEye      'electric eel'
```

See also <u>cualeng</u> 'young girl' and <u>poleng</u> 'young boy'.

a class   Plurals: all animate plurals

la class Plurals
           a. most inanimates
           b. some body parts
           c. many verbs
     Abstract: most plurals of le class abstractions

ng class Plural
           a. metals
           b. some body parts
     Plural/Collective: small, round objects

Already mentioned are several special functions of the le

class, diminutivization and abstractions, and the o and a

(animate) or la (inanimate) classes as being the

destination for non-liquid borrowings. Another special

function is that of the i class pronouns, which function

as indefinites, i.e., when the class of the referent is

not known or indefinite.

    (46) i class as an indefinite pronoun

```
     H   L   LH  LL F     H L H  L  H L  L  L L  L L    F H
     le mi nyOO kaanung wana o la-bolo, i co i kala kpoke
for Conj thing hawk someone from throat it Aux Pro hard Id
   'To hawk a thing up and spit it out can be quite hard.'
```

The whole *le mi* clause here serves as the antecedent and

can be readily assigned to no one class.

5.4 Some exceptions

There are several classes of exceptions to the

generalizations expressed above. One class of exceptions

is a set of nouns with no plurals, falling into several

identifiable semantic classes. One class is a set of

abstract nouns belonging to the *le* class.

(47)   Abstract nouns with no plural

LL L H
puululeng   `the state of being Westernized'
LL L H
doosuleng   `hunting'
L L H
masaleng   `chieftaincy'
L   HH
langmgbEi   `state of being (sexually) mature'

Most of these nouns have related forms and thus may
represent derivational relationships (see Chapter 7:
Derivational morphology). For example, there is the
adjective *puulu-* `Westernized' and the noun *doosunOO*
`hunter'.

Other nouns that have no plural are given below.
Among other things, this set includes natural phenomena
and body parts.

(48)   Other nouns with no plural

L H H
piOO   `rain'
L   H
nyumndang   `darkness'
HH H HH
ngualalEi   `lightning'
L L H
yumboo   `fog'[11]
L H
hOlla   `face'
R H
kOmndo   `uterus'

---

[11]   In its reduplicated form, the word for `fog' has
a plural but it can be used only `jokingly'.

H H H HH   H H H H H
yumboyumboo yumbuyumbulang   `fog'

LL H
diolang   'name'
LH
yiang   'hunger'

It is also true that some nouns belong to more than two classes. Several examples are given below.

(49) Nouns belonging to more than two classes

LLH L H   L H
tiOO tEleng tElang 'sheaf of rice' <u>o/le/la</u>
L LH L LL H   L LL H
kpatoo kpatooleng kpatoowe 'whip, cane' <u>o/le/i</u>
L HH L H H L H
yOwaa yOwaleng yOwang 'necklace' <u>o/le/ng</u>

As can be seen, the diminutive dimension of the <u>le</u> class is responsible for the multiple membership in these cases. That is, in each case the *-leng* suffix denotes that the object is a small one.

5.5 Summary

This brief survey has demonstrated the productivity and vitality of Kisi's noun class system, yet has not neglected to show the fraying at the system's edges. The semantics present some problems to analysis, and the morphophonemics, discussed earlier in Chapter 3 are quite complex. These facts (among others) suggest there has probably been some melding of classes. That Kisi has only seven classes (other related languages have many more) confirms this impression. Nonetheless ths system is still important for the grammar in determining agreement for a number of different word categories.

Chapter 6: Inflectional morphology, verbs

6.1 Tense, aspect, and modality (TAM)

6.1.1 Prefatory remarks

From a typological perspective the two categories providing most of the inflectional contrasts for Kisi verbs are tense and aspect. It is also clear that aspect provides the bulk of the distinctions. Tense, rather than representing a basic distinction, is marked sporadically and is not morphologically integrated into the inflectional system of verbs. In Kisi there are also the problems of overlapping contrasts, that is, a formal contrast may register more than one semantic contrast. Furthermore, a formal contrast may be both aspectual and temporal.

The semantics of tense, aspect, and modality (TAM) systems have provided analysts with considerable difficulties. Terminological confusion and overlap has been one problem (Friedrich 1974:S6-7). This problem of overlapping categories has often engendered despair:

> ... it must be recognized that at this point there is
> not, and cannot be, in universal grammar any sharp
> distinction between tense and aspect, on the one
> hand, and between tense and modality on the other.
> <div align="right">(Lyons 1977:687)</div>

<div align="center">260</div>

Despite this dire assessment, we will identify such
distinctions below.

6.1.1.1 Sentence structure

Before discussing the complexities of tense, aspect,
and modality in Kisi, it is necessary to recall basic
sentence structure. In sentences with a simple (non-
compound) predicate, the order of basic elements is
Subject-Verb-(Object)-(Object) illustrated below.

(1)   Basic sentence order with simple predicates

	L L H L	
SV	*saa cilul*	'Saa is fat.'
	Saa fat	
	L L L H L L H	
SVO	*saa kinda dioo*	'Saa closed the door.'
	Saa close door	
	L L H H H H H	
SVOO	*saa ke ya kaniung*	'Saa gave me money.'
	Saa give me money	

In sentences with a compound predicate, the first member
of which can be considered an auxiliary, the order is S-
Aux-(O)-(O)-V.

(2)   Basic sentence order with compound predicates

	L L H L L H L L L	
SAuxOV	*saa wa dioo kindaa*	
	Saa Aux door close	
	'Saa was closing the door.'	
	L H H H H H H R	
SAuxOOV	*o co ndu kona doonOng*	
	Pro Aux Pro message relate	
	'She will give the message to her.'	

In these compound constructions the verb (as opposed to
the auxiliary) is in its non-finite form. The form of the

auxiliary bears all information about tense, aspect, and polarity.

Another piece of information is necessary before embarking on our discussion of verbal inflections. In citation form verbs are given in a nominalized form, usually with the suffixes -o or -O(O). This form I will refer to as the infinitive; although generally functioning as a noun, it also appears in compound verb forms.

6.1.1.2 Overview

Below I indicate the different ways in which contrasts are marked within the system of tense, aspect, and modality. In the interests of completeness, I have not differentiated between those distinctions that are purely inflectional and those that are periphrastic, i.e., categories that are expressed by means of auxiliaries and particles. The formal expression of tense and aspect can be both morphological (/synthetic) and syntactic (/analytic) (cf. Comrie 1976, 1987).

(3) Marking within the TAM system

1. Tone changes on verb
2. Ablaut (stem-vowel changes)
3. Post-verbal particles
4. Pre-verbal auxiliaries
5. Pronoun vowel lengthening
6. Tone changes on non-verbal material

The range of devices in (3) demonstrates the different resources that are exploited in registering contrasts

within the system; they are not necessarily mutually
exclusive.

The list has been constructed following a principle
of "degree of fusion" (Bybee 1985), so that the markings
become (roughly speaking) more peripheral to the verb stem
itself. That is, there is less immediate effect on the
verb in terms of physical change in the verb or in terms
of physical proximity. One can speak of the extent to
which affixes are morphophonologically fused. Contrasts
can be shown on the verb either segmentally or tonally, on
items before and after the verb including pronouns and
even on a conjunction fused with a pronoun.

This order also represents the order of puissance of
each mark, i.e., the quantitative extent to which the mark
is used. For example, there are more contrasts marked by
tone changes[1] on the verb than there are marked by ablaut.
Fewer distinctions are marked by post-verbal particles and
pre-verbal auxiliaries, while the last two means are used
for only one distinction each.

Below I present the full paradigms for "Regular" and
Irregular verbs, the difference being that Irregular verbs
feature stem vowel changes. Semantic distinctions will be
discussed below (Sections 6.1.2.1 ff.)

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[1]   Besides inflectional differences, the nature of
the subject may have an affect on the tones of the verb.
Proper nouns and the pronoun *i H* 'I' all raise the tone
of the first syllable (see 3.0 Phonology).

(4)   Tense, aspect, modality, and polarity distinctions for Regular verbs

Infinitive:	L LH cimbOO	'to leave, leaving'

Affirmative

Imperative:	H H cimbu	'Leave!'
Habitual:	L L L o cimbu	'She (usually) leaves.'
Perfect:	L L H o cimbu	'She left.'
Pres Perfect:	L L H F o cimbu ning	'She has left.'
Hortative:	L L H o cimbu	'She ought to leave.'
Imperfective:	H H L L oo cimbu	'She used to leave.'
Consecutive:	L L L mbo cimbu	'... and she leaves.'
Past Consec:	H L L mbo cimbu	'... and she left.'
Future:	L L L L o co cimbu	'She will leave.'
Progressive:	L L L LL o co cimbOO	'She is leaving.'
Past Prog:	L H L LL o wa cimbOO	'She was leaving.'

Negative

Imperative:	H L H cimbu le	'Don't leave!'
General:	L L H+[2] H o cimbu le	'She doesn't/didn't leave.'
Pres Perfect:	L L H L H o cimbu wO le	'She hasn't left (yet).'
Hortative:	L H L H o cimbu le	'She shouldn't leave.'
Imperfective:	H H L L L oo cimbu le	'She never used to leave.'
Fut/Prog:	L H L L L o co cimbu le	'She won't/isn't leaving.'
Past Prog:	L H L L L o we cimbu le	'She wasn't leaving.'

---

[2]   "H+" represents the extra-high tone in Kisi.   See Chapter 3: Phonology for a full discussion of Kisi tone.

The verb *cimbOO LLH* 'to leave' is "regular" in that there are no vowel changes in the stem. As can be seen not all formal distinctions obtain with Regular verbs; for example, the Perfect and Hortative are formally identical for Regular verbs. Irregular verbs are those such as *kiolOO LLLH* 'to bite', presented below.

(5) Tense, aspect, modality, and polarity
for irregular verbs

	L LH	
Infinitive:	*kiolOO*	'to bite, biting'

Affirmative

	H H	
Imperative:	*kiol*	'Bite!'
	L LL	
Habitual:	*o kial*	'She (usually) bites.'
	L L³	
Perfect:	*o kel*	'She bit.'
	L L F	
Pres Perfect:	*o kel ning*	'She has bit.'
	L LH	
Hortative:	*o kiol*	'She ought to bite.'
	H H LL	
Imperfective:	*oo kial*	'She used to bite.'
	L LL	
Consecutive:	*mbo kial*	'... and she bites.'
	H LL	
Past Consec:	*mbo kial*	'... and she bit.'
	L L L L	
Future:	*o co kiolO*	'She will bite.'
	L L LL LL	
Present Prog:	*o co kiolOO*	'She is biting.'
	L H L LL	
Past Prog:	*o wa kiolOO*	'She was biting.'

---

[3] This verb belongs to a small group of tonally irregular verbs (discussed in 6.1.1.4 Tonal irregularities). In most cases the tonal pattern on past forms is LH.

Negative

Imperative:	**HL H** *kial le*[4]	'Don't bite!'
General:	**L H+ H** *o kil le*	'She doesn't/didn't bite.'
Pres Perf:	**L H+ L L** *o kil wO le*	'She hasn't bit (yet).'
Hortative:	**L HL H** *o kial le*	'She shouldn't bite.'
Imperfective:	**H H L L** *oo kil le*	'She never used to bite.'
Fut/Prog:	**L H+ LL L L** *o co kiolO le*	'She won't/isn't biting.'
Past Prog:	**L H+ L L L** *o we kiolO le*	'She wasn't leaving.'

Schematizing Kisi tense and aspect distinctions, I follow the format used by Heath 1984 (reproduced in Haiman 1986:659). Each cell contains the mark for each distinction, tonal and segmental. Tone is the basic mechanism by which distinctions are made; vowel stem changes, limited to Irregular verbs, are not shown. Besides tonal and segmental changes, the Negative always occurs with negative particle *le*, which also is not shown below. I have not included contrasts in modality (Imperative and Hortative) in order to simplify the display.

Each cell contains the tonal contour associated with the relevant distinction. If there is additional segmental material, such as a pre-verbal auxiliary or a post-verbal particle, that, too, is shown but below the first (tonal) line with its associated tones above. Tones

---

[4] The phonetic form of the negative particle is [te] and the Negative Past Progressive auxiliary is realized as [ve], two changes which I have not shown here.

with no segmental material on the line below them are to be attached to the verb itself.

Polarity	Perfective		Imperfective			
			Habitual		Progressive	
	- -	Present	Past	- -	Past	Present
Affirm	L H	L H F *ning*	H H L *oo*	L	H L *wa*	L L *co*
Negative	L H+	L H+ L *wO*	*	L H+	H *we*	H *co*

Table 1: Tense and Aspect in Kisi

Notes: 1. The dashes ("- -") represent the unmarked or default member of the opposition. In the two cases above, the dashes represent "Not specifically Present Perfective" and "Not specifically Past Habitual".
2. The Negative Perfective and the Habitual Negative are formally identical, referred to as the General Negative elsewhere.
3. Not shown: Imperative, Hortative, Future, Consecutive

As might be surmised, some idealization has been incurred in the pursuit of neat compartmentalization. For example, the Past/Present distinctions are not as fully established as the diagram might suggest, and I have not been able to include the Future, a less well established distinction than those presented above. It might have been better to use the marked/unmarked distinction or even to use blank spaces (see Friedrich 1974:S18) where a contrast in irrelevant. The details are presented below.

What can be inferred from this display is the importance of aspect to the system. As with most Niger-

Kordofanian-Congo (NKC) languages, the most important contrasts in Kisi are those of aspect. There is no inflection solely for either past or future, and it is difficult to identify any real present tense. The most basic contrasts, at least those manifested inflectionally on the verb, are those between Perfective and Imperfective, mood (Hortative and Imperative), and polarity (Affirmative and Negative).

Tense distinctions, on the other hand, are not marked on the verb. The difference between the Past and Present Progressive is marked lexically, for example, with the contrast between *wa* (Past, 'was') and *co* (Present, 'is'). Past Habitual is marked on the subject pronoun.

This display also shows that Kisi lacks a full set of contrasts for the Negative. There is, in addition, one way in which negative forms are decidedly different. All negated clauses have a clause-final negative particle *le*. No other verbal distinction has a clause-final mark. The total system formed by negative verb forms is further distinguished from affirmative forms in that the system is not complete. There are not so many contrasts among negative verb forms. This situation is true of Swahili (Ashton 1944:70) and is common throughout NKC, e.g., Mende; rarely do negative systems fully parallel

affirmative ones (Welmers 1973:380)[5]. We can also see
that the language has several resources for conveying
differences in tense, aspect, (modality,) and polarity.

6.1.1.3 Polarity, the Negative

Polarity constitutes an important part of the
inflectional system of Kisi verbs and will be included in
the discussion of the other oppositions in aspect, tense,
and mood, despite its questionable inclusion in this
category. Clearly the Negative is not a tense, for it
makes no reference to time. Comrie (1985:7, FN 4) advises
that we avoid the "terminological confusion" caused in
labeling negatives as "tenses". Although I will consider
polarity part of the total system of TAM, polarity is not
tense, aspect or modality, and we should keep Comrie's
caveat in mind.

One reason for discussing negation as part of the
inflectional system of Kisi is that negative verb forms
partake of the same linguistic resources, e.g., tonal and
vowel changes, as do other verbal inflections. Aside from
the addition of a clause-final particle *le,* the changes in
negative forms are identical to those elsewhere in the
system.

---

[5]   It is likely that this. is a universal
characteristic (John Singler, p.c.).

There is little unity elsewhere to the system of negation. Aside from the clause-final negative particle *le*, no other mark consistently distinguishes the negative forms. This situation parallels that in Kpelle, an unrelated but nearby language. Kpelle has a negative marker *fe H*.

> Beyond this, however, negatives cannot be derived from affirmatives by a simple transformational rule. Rather, negatives independently show the same formulaic structure as affirmatives; the remainder of each is a construction marker and a verb root with an affix.
>
> (Welmers 1973:402)

Fula, a language belonging to the Northern Branch of Atlantic (Kisi belongs to the Southern Branch), marks the negative in two separate ways. One way is by the normal processes within the tense-aspect system; the other is by means of the negative particles *naa* and *to*. Arnott comments that the former way (without the particle) is so well integrated into the system that the negative forms can be seen as direct "counterparts" to the positive forms (Arnott 1970). There is also the case of Diola-Fogny where negation and tense are marked by a single morpheme (Sapir 1965:33).

Temne negative forms are also considered to be closely integrated within the tense-aspect system. In fact, Wilson goes so far as to call negative forms "tenses"[6] (pace Comrie 1985). Negation is signaled by

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[6]   Sapir labels such distinctions "mode" (1965:33).

tonal changes as well as by a suffix *-hE* and auxiliary *te* (Wilson 1961:25-26).

Besides the formal evidence, then, there is some precedent in the treatment of other related languages, and in the treatment of African languages in general, for us to treat negation as forming part of the larger verbal inflectional system of tense, aspect, and modality. It is that practice which will be followed here.

6.1.1.4   Tonal irregularities

The verbal system of Kisi is tonally regular with one exception. A small class of verbs does not follow the regular pattern in the Perfective. If the tonal pattern of the Perfective can be analyzed as consisting of a low tone followed by a high, a small set of verbs can be seen as irregular verbs in having only low tones in this environment.

(6)   Tonal irregularities in the Perfective

Expected (LH)	Irregular (L)
L LH ■	L L
o yei ya	*o ye*
'She cursed me.'	'She danced.'
L L ■	L L L
o hulu	*o hulu*
'She jumped.'	'She threw out.'

This tonal irregularity is restricted to monosyllabic and disyllabic verbs. The implications of this irregularity are discussed below. Verbs with extensions (see 6.2 Verb

extensions), even those related to these tonally irregular
verbs, are always regular.

6.1.2 Regular verbs

In this section I discuss the semantics of the
tense-aspect-mood system, illustrating semantic
differences, for the most part, with examples from
"regular" verbs, which show no stem changes, i.e., in
terms of segmental differences. Contrasts are shown
primarily by tone but also by auxiliaries.

6.1.2.1 Habitual

The Habitual signifies something happening more than
once, often customary or usual action continuing into the
present and even into the future. In Kisi "iteration" (in
the sense of Dahl 1985:97) is not a useful concept, for
verbs can be pluralized (see 6.2.4.7 Plural below) and
there iteration is essential. As Comrie points out, "a
situation can be referred to by a habitual form without
there being any iterativity at all (Comrie 1976:27).
More important for the Kisi Habitual is that the action
take place usually or continually. Commonly the
distributive adverb *lo-o-lo* `from-time-to-time, usually'
accompanies its use. Furthermore, the action of the verb
continues into the present. If the action cannot continue

or has ceased, the Imperfective is used, commonly translated, 'was ____ (but is no longer)'.

As opposed to the Perfective, the Habitual expresses the sense that the action will continue. Stative verbs do not usually partake of this aspect. The display below shows the ungrammaticality of the Habitual for several stative verbs.

(7) The ungrammaticality of stative verbs in the Habitual

	L L H	
Perf	o culu	'It's slippery'.
	L L H+ H	
Gen Neg	o culu le	'It's not slippery.'
	L L L	
Habit:	* o culu	

	L L H	
Perfect:	o bandu	'She's tall.'
	L L H+ H	
Neg:	o bendu le[7]	'She's not tall.'
	L L L	
Habit:	* o bandu	

The only way a form with a sense of past could be elicited for stative verbs was by means of the Imperfective. The meaning of the Imperfective for the first of the two stative verbs above would be, 'It was once slippery but is no longer.'

Unexceptionally the tonal pattern on the Habitual is all low tones.

---

[7] The vowel change, [bandu] vs [bendu], is typical of the a/e class of verbs and is not relevant to the presentation here.

(8) Habitual: L

```
 L   L                           L   L
o ce  `She (usually) sees.'   o cal      `She sits.'
 L   L L                         L   L L   L
o pulu      `She washes.'     o fasanga   `She splashes.'
  L H  L  L   LL   L H
10-o-10 o saa sOO    `She always holds the chicken.'
time-to-time Pro hold chicken
```

As mentioned above, some verbs are low-toned in the
Perfective. These verbs show no contrast between the
Perfective and Habitual forms. The verb *pulu* `wash' is
such an example above; the form there could mean either,
`She bathes (habitually),' or `She washed.'

6.1.2.2 Perfective

In a general sense, the semantics of the Perfective
differ with regard to active and stative verbs. If a verb
is stative, the meaning of the Perfective is that the
subject has already achieved the relevant state, actually
`is ___' at the present time. If the verb is active, the
sense is that the action has taken place in the past (cf.
Arnoff 1987:118 for discussion of "the well known
connection between perfect aspect and past tense").

> ... some languages use a single construction to refer
> to past time for active verbs and present time for
> stative verbs; for such languages, a term like
> "factative" may be preferable, and the grammar may
> very properly make no reference to a "past tense" as
> such.
>
> (Welmers 1973:348)

But the Kisi Perfective is ambiguous about the time of the
verb's action. The Perfective may be used to signal

simply that the action or state has been completed, rather than making explicit reference to time. Although there is some evidence that the Perfective refers by default to past tense with active verbs and to present tense with stative verbs, this association is not necessary. What is most important is that action have been completed or that the state have been achieved, and thus the term "Perfective" is preferred.

(9) Stative verbs in the Perfective

```
  L    L   H                    L    L  H
a nyulu                       i nyumi
they listless-Perf            it extinguish-Perf
'They are listless.'          'It (the fire) is / went out.'

  L    H    L  L    H
mEngndang ma tengga
water        Pro clear
'The water is clear / cleared up.'
```

The second and third examples show the ambiguity involved when translating into English. If the translation is by means of a stative verb 'be clear' the Present is used; if it is by means of an active verb, the Past must be used.

If the verb is active, the sense conveyed is that the action has already been completed. The sense of past, of course, is associated with this meaning. The fact that Kisi has a Present Perfective supports this interpretation. The Present Perfective uses a particle ning F, which is transparently related to the word 'now' of the same form. In the Present Perfective the verb itself is marked as Perfective (see the discussion below).

That speakers need to mark the Perfective as `present'
suggests an underlying meaning of `past' to the Perfective
itself[8].

(10) Active verbs in the Perfective

```
LH  LH L  R   L     H     H H
poombOO o del lEng kpungmgbulung
boy   Pro fall-Perf ground Ideophone
`The boy collapsed on the ground.'
```

```
L  LL HH  L   HH  F  H  F  H
o deembuu hEnggOO lakpo-lakpo
Pro lick-Perf pan Ideophone
`He licked the dishpan with gusto.'
```

```
L   L  L  R   H    HL
o nyumbu kOmndeng tiu
he twist-Perf fiber Ideophone
`He twisted the fiber hard.'
```

The tonal pattern for the Perfective is LH. Monosyllabic

verbs receive a Rise, i.e., a doubly association of two

tones with a single vowel; disyllabic verbs receive a Low

High, and verbs with three syllables receive a Low High

High. In autosegmental terms, the tonal pattern for the

Perfective is LH, assigned left to right, with the High

spreading to the right.

---

[8]   The Perfective is also used for the imminent
future in some instances, as Comrie has found is possible
in Russian (1985:20). One can also compare this usage to
the English slang, `I'm gone,' as one is preparing to
leave. This latter usage is comparable to the way it may
be used in Kisi.

```
H   H F
i kwEnung        `I'm gone, i.e., I'm about to leave.'
I go-Mid-Perf
```

The sense here is that the action will take place (be
completed) and actually thus even has a modal component.

(11) The LH pattern of the Perfective

```
L H          L   H     L     H         L         H
 \|           |   |     |    / \        |       / /|  \
C V          C V C V   C V C V C V     C V C V C V C V⁹
```

```
L  R                          L   LH
o cO        `She buried.'      o pei        `She filled.'
L  L H                        L   LL  H
o kala      `She loved.'       o baamba     `She hooked.'
L   L H  H                    L    L H  H
o fasanga   `She splashed.'    o dilinga    `She piled.'
```

As mentioned above, there is a small set of verbs which does not receive this pattern; they are low-toned throughout. I give some representative examples.

(12) Verbs with low tones in the Perfective

```
L  L                          L  L
o bi        `She held.'        o hing       `She came.'
L   L  L                      L   L  L
o nyindu    `She pushed.'      o hindu      `It' s swollen.'
```

No semantic generalization is available for this group of verbs. This is the only part of the verbal morphology that features a tonal irregularity, i.e., a tonal pattern different from that for all verbs. It is likely that this set of verbs is a remnant of a verbal system in which verbs had tone assigned lexically, rather than by the grammar only (Childs 1987). That is, at some earlier state of the language, tonal differences between sets of verbs affected the entire verbal paradigm, rather than only the Perfective.

---

9   The "C's" and "V's" in this display intend to make no theoretical claims.

In the Negative Perfective there are no exceptions. All verbs receive the same sequence LH+. It is here that the contrast between the High and Extra-High tones is evident. Although the Negative is marked with a clause-final particle *le H*, the tone on the verb are significantly higher than the High on the Affirmative Perfective. Moreover, each syllable is longer and louder in the Negative (Childs 1988a). It is for these reasons the tone is considered to be "Extra-High". I give below examples from verbs that are regular and irregular (Low-toned) in the Perfective. As mentioned above, the Negative Perfective and Negative Habitual are formally identical. Because of the fact that it is neither aspectual nor temporal, I will hereafter refer to this form as the General Negative[10].

(13) General Negative

L H+ H	L H+ H
o tu le	*o wo le*
'He didn't measure.'	'She was not afraid.'
L L H+ H	L L H+ H
o hulu le	*o kendu le*
'He never jumped.'	'She was not strong.'
L L H+ H+ H	L L H+H+ H
o dilinga le	*o pangala le*
'He didn't pile up.'	'She was never jealous.'

---

[10] The term comes from Ashton where she claims the Swahili General Negative expresses "the <u>fact</u> of negation without reference to time" (1944:71).

6.1.2.3 Hortative and Imperative

The two moods that are distinguished in the Kisi

grammar are the Imperative[11] and the Hortative. The

Imperative has the normal semantic associations found in

other languages, i.e., it is used for issuing commands and

orders.

(14) Imperative

```
 H  H   H  L
dimi wElE!     `Repeat!'
say  again
```

```
 H  H    HH   HH H   LL  L  L    L  LL
tosa kpeekpei a yoomuma fulaa!
do    a lot   with breath come out
`Do a lot with breath outpouring!' = Work hard!
```

```
 H  H   H +H     H+12
dilinga seng-seng!
pack       Ideophone
`Pack (it, the container) properly!'
```

```
 HH  HHH   H  LL  LL   LL LH  HH  H   +HH H  HH H+
saandiaa ndu yiingii liimiangii keng siabu-siabu
comb     Pro hair    tangled    that Ideophone
`Comb that (his) tangled hair straight!'
```

The tones assigned to the Imperative form are all High, as

the examples above show. The second and third examples

---

[11]   Whether or not the Imperative can be considered
a mood is somewhat controversial, primarily because of its
special characteristics (Dahl 1985:26). Traditionally it
has been assigned to the category of mood, and that
practice will be followed here.

[12]   When a "+" appears before a High (tone) on the
tonal level, it signifies that the following tones are
part of an exaggerated pitch range, usually only towards
the upper end. This exaggerated range continues until a
"+" following a tone, in most cases the last tone of the
ideophone. This contrast is marked only where it is
significant, as here, where I show the difference between
the tones of the Imperative and those of ideophones.

illustrate that the tones on the Imperative, although High, are still not so high as those associated with the exaggerated range often found with many ideophones.

The form used for the Imperative is a truncated form of the infinitive. It is the unmarked form of the verb, the common form of the Imperative in many languages (Bybee 1985:172). All tones are high. (I give below examples for the "singular" Imperative; the "plural" is formed by using the second person plural pronoun *la* L 'you (pl)' before the same form of the verb.)

(15) The Imperative

<u>Infinitive</u>   <u>Imperative</u>

L L L H *fasanga* + a	H H H fasanga	'splash'
L H *sim* + *ndang*	H sim	'stand'
L H *yo* + *lang*	H yo	'dance'
L L H *sEE* + *O*	H H sEE	'cut brush'
L L H *mal* + *OO*	H mal	'leave'

The Negative Imperative shows segmental differences (for Irregular verbs) from the Infinitive and has a tone pattern of HL.

(16) Negative Imperative

<u>Infinitive</u>   <u>Neg Imperative</u>

L L L H *sEE* + *OO*	H L H sia le	'cut brush'
L L L H *siol* + *OO*	H L H sial le	'sculpt'
L L L H *diondu* + *o*	H H L H diandu le	'be clean'

```
HH LLL   H   H   L   LH   H   H
```
baasiaa wallo kindOO le pa!
Stretch work effort Neg Ideophone
'Don't work too hard on the job!'

There is a close formal relationship between the second

person singular form of the Hortative and the Imperative

(itself limited to second person), as might be expected

from the semantics of the two moods.

(17) Imperative and second-person Hortative

<u>Imperative</u>   <u>Hortative</u>

```
 H  H  H                      L      H  H   H
```
kpisinga!   *num kpisinga*
sneeze-Imp   you sneeze-Hort
'Sneeze!'   'You should sneeze.'
```
 H  L  L  H                   L      H  L   L   H
```
kpisinga le!   *num kpisinga le*
sneeze-Imp Neg   you sneeze-Hort Neg
'Don't sneeze!   'You should not sneeze.'

A further indication of the close relationship between the

Imperative and the Hortative, at least in the second

person singular, can be seen in the Hortative paradigm for

'see' below, identical for two informants. The verb *cOO*

'see' is another example of a segmentally irregular verb.

(18) Hortative

	Affirmative	Negative
1st sg	H H H *i cO ndu*	H H H H *i ca ndu le*
2nd sg	H H *cO ndu*	H H H *ca ndu le*
3rd sg	L H H *o cO ndu*	L H H H *o ca ndu le*
1st pl	L H H *ng cO ndu*	L H H H *ng ca ndu le*
2nd pl	L H H *la cO ndu*	L H H H *la ca ndu le*
3rd pl	L H H *a cO ndu*	L H H H *a ca ndu le*

The form for the Hortative in the second person singular
is formally identical to that for the singular Imperative.
That the relationship is real to speakers is shown by the
fact that speakers usually give the imperative form for
'You should (not) see,' i.e., the second-person Hortative.

The Hortative expresses the speaker's wish that the
action of the verb be performed. In the first person
plural it could be translated as, 'Let's ___'; the usual
translation is 'should' (cf. Welmers 1973 356ff.) or
'ought to'. The Hortative can often be used as an
indirect command[13].

(19) Hortative

```
L   L H    H  LH  H    H  H    L  H     H
o vEsul la saa long o pEnggi cangndo
Pro nurse me Saa so-that Pro stop cry
```
'She ought to nurse Saa so he would stop crying
[because the crying is bothering the speaker].'
```
   L    L    L  LL H    H  L  HH   L   H
nyEm mung ng kEEsung o bandei bEnggu
thing those Pro keep Prep platform Post
```
'Those things should be kept on the platform.'
```
L  LL H    LH H  H  H  LL R     H  H
o kiolung naa o nO le kiolOngndo wa
Pro cut    thus Pro have cut-Mid  Prt
```
'Let it / it should be cut the way it should be cut.'

The tones on bi- or trisyllabic verbs are LH(H); on
monosyllabic verbs the contour is R optionally simplified
to H.

(20) Hortative tone patterns

```
L  R / H                        L  LH / H H
o lo      'She should beat.'    o tuu  'She should fold.'
```

---

[13]   Sapir calls a similar distinction in Diola-Fogny
the "emphatic" (1965:33).

L   L M   L   L M
o nyumi   'She shd ignite.'   *o busu*   'She should bark.'
L L M M   L   L M M
o fulula 'She shd parboil.' *o fasanga* 'She shd splash.'

The Hortative Negative has a tone pattern of H (probably a reduction of HL) on monosyllabic verbs and HL(L) on di- or tri-syllabic verbs. The Negative Hortative is also distinguished by a Low on *le*, the Negative particle, (elsewhere *le* has a High).

    (21) Hortative Negative

L   M L
o lo le   'She shouldn't beat.'
L   MM L
o tuu le   'She shouldn't fold.'
L   L M L
o nyumi le   'She shouldn't ignite.'
L   L M L
o busu le   'She shouldn't bark.'
L   M L L   L
o fulula le   'She shouldn't parboil.
L   M L   L   L
o fasanga le   'She shouldn't splash.'

Similarly to the Perfective, the Hortative can be seen as consisting of tonal contours, Affirmative = LH, Negative = HL, being assigned in a left to right fashion, with a multiply associated right tone.

    (22) Tonal assignment in the Hortative

<u>Affirm</u>   L H   L   H   L   H
            \| | | | /\
           C V   C V C V   C V C V C V

<u>Neg</u>   H L   H   L   H   L
           \| | | | /\
           C V   C V C V   C V C V C V

Within this framework, another optional rule will simplify

the tones on monosyllabic stems through the loss of the low tone.

6.1.2.4 Imperfective

The Imperfective denotes an action which continued for a time in the past but is no longer continuing now, or a state which once obtained but is no longer in effect. In this it parallels Homeric Greek imperfect in referring to the "durative past" (Friedrich 1974:S10-11). It contrasts with the Perfective in that the latter refers to a completed action.

(23) Imperfective

L L
o kol   'He drank (it).'
H H L
oo kol   'He drank (but it didn't stay down).'

H H H
i kOsa   'I judged (cases).'
H H H L
ii kOsa   'I used to judge (cases).'

H H L L
oo dendu   'It was (once) clean (but no longer is).'

H H L L
oo bandu   'He was (once) tall (but has now shrunk).'

L L H H F H H H H H H H H H F H L H H H F
boondii binggiinaa ko ndi ii lo ning ni mi ndu oo vi
period time just it Pro-Imperf stay Tns Foc Consec Pro-
Imperf die
'Only a short time was remaining before he was to die.'

Below I show the Imperfective with a variety of different subjects. The form of the verb is the same as for the Habitual.

(24) The Imperfective with different subjects

```
L   L L
o cilul              'He is fat.'
H H   L L
oo cilul             'He was fat (but is no longer).'
  H H   L L
ndoo cilul           'He (emphatic pronoun) was fat.'
  L L    H H   L L
saa ndoo cilul       'Saa was fat.'
  L    H    H H  L L
tungndo ndoo cilul   'The dog was fat.'
```

That an aspectual distinction is marked on the subject pronoun is rare from a typological perspective since "aspect is the category most directly and exclusively relevant to the verb" (Bybee 1985:21). In West Africa, however, such marking is not that unusual. For example, Wolof (related to Kisi) marks the majority of verbal distinctions on its subject pronouns (Sauvageot 1981). Furthermore, lengthening of the subject pronoun is how Kru languages (distantly related to Kisi) distinguish Completive from Incompletive / Imperfective (Singler p.c.).

It should be noted that it is only the vocalic portion of the subject pronoun that is lengthened. That this is true is shown by the form of the second person plural pronoun in the Imperfective.

(25) Vowel lengthening in forming the Imperfective

```
H H   L
laa mal   'You-all lost (something) but then found it.'
```

The form is not *lala* as would be the case if the morpheme in its entirety were reduplicated.

From a diachronic or evolutionary perspective, it seems likely that the unusual placement of an aspectual marker may be the residue of a fuller form. It is likely the lengthening of the subject pronoun (and perhaps tonal material[14]) is all that is left of an aspectual particle that has since disappeared[15]. In that the "newer" aspectual particles, such as *ning F* (see Present Perfective below), follow the verb, the situation is parallel to that of renewal in the noun class system (Childs 1983).

The Negative Imperfective is formed simply by the addition of the clause-final negative particle *le*. There are no changes in the subject pronoun or verb; they are identical to the Affirmative forms.

(26) Negative Imperfective

```
H H    L  H
oo kwe le      'He wasn't going / used to not go.'
H H   L L   H
oo cilul le    'He wasn't / used to not be fat.'
```

The form of the verb here is the same for the Habitual and, as will be seen below, the same for the Consecutive.

---

[14] See my discussion of the effect of the tonal peculiarities of names in 4.1.3.

[15] The suggestion for this scenario comes from Singler (p.c).

6.1.2.5 Consecutive

There is some question as to whether or not "Consecutive" should be considered a separate category commensurate with the more robust aspectual distinctions already discussed. My reason for considering it separately is that it registers a tense distinction on the pronoun in much the same way as the Imperfective. Segmentally the verb is in the same form as that for the Habitual and the Imperfective.

(27) Consecutive and Past Consecutive

	L L	
	mbo kwE	'And (then) he goes.'
	H L	
	mbo kwE	'And (then) he went.'

As with the Habitual, there is no time component explicitly conveyed[16]. The verb usually takes its cue from a previous verb or from the context in which it is uttered. Tense is only marked for the Past.

The pronouns used in the Consecutive appear after the conjunction *mi*, which combines with them as shown below.

(28) Consecutive conjunction and subject pronouns

	Singluar	Plural
1st	*mi* + *i* -> *mi*	*mi* + *ng* -> *ming*
2nd	*mi* + *a* -> *ma*	*mi* + *la* -> *mila*
3rd	*mi* + *o* -> *mbo*	*mi* + *a* -> *ma*

---

[16] Below I refer to the "Present" Habitual. This I do only when there is a chance of confusion with the Past Habitual. Otherwise I will use only the term "Habitual".

I have not shown the tones on these forms because they vary as to whether the Consecutive is Present or Past. The (Present) Consecutive is marked by a low tone on the accompanying conjunction, which has combined with the subject pronoun. I illustrate the tonal differences below.

(29) Present Consecutive

```
L   LL  R      HHH H HH   H    L   LLL   H L
o hEEnung hiOOdOlOO le mbo hiou nanu
'He drew in his stomach to pass by here.'
L   H   F     H H  L   LL HL      H      H
o lo ning cobe ma siimiang kpEngnyji
Pro stay now little Consec be-equal Ideophone
'It remains just a little and they will be equal.'
```

The Past Consecutive is marked by a High on the combination of the consecutive conjunction and subject pronoun.

(30) Past Consecutive

```
L   L L  H HH  H L    H   L  H L    L    L L
o kelu bOlOO tusu mbo lo tusungbunggulu
Pro cut banana tree Idph Consec stay Idph
'He chopped down the banana tree and it became quite
short.'
L  LH   H  HHL     H  LL H   H  LH  L LH   L
o saa ndu muEEng mbo kua a ndu naa masaa ca
Pro hold Pro Idph Consec go Prep Pro Prep chief Post
'He held him firmly and he took him to the chief.'
 L   H  L  R    H  H L  H  L    H L  L L   H
tamba bEngingndo wadi mi cingnde i fula fang
Tamba fall        Idph Consec tooth Pro come-out Idph
'When Tamba fell down hard, the tooth came out.'
```

The third example shows how when a noun intervenes between the conjunction and the subject pronoun, the tone marking tense, here a High, falls on the conjunction rather than the pronoun.

The verb following the consecutive conjunction can often be in its infinitive form and takes its cue from the inflection of the preceding verb.

(31) Infinitive after the consecutive conjunction

```
L    H    H   LH H    LHH    L   LL   LLL   H R      HH H   HH H
a wa ndu koowang kioo mbo saandiaa pelong siabu siabu
they Aux him medicine give Consec throw feet Id
`They were giving him medicine and he was kicking
violently.'
```

The second verb *saandiaa* is infinitive in form but precedes its object as it would in no other compound verbal inflection. The tone on the combination of consecutive marker and pronoun is low-toned, as it would be with the Present Consecutive. It is clear, however, that the kicking took place at the same time (or immediately consequent on) the administration of the medicine, both of which are anterior to the present.

Verbs following the consecutive conjunction cannot be negated.

6.1.2.6 Present Progressive

The Progressive conveys the meaning that the action is continuous or on-going. While the Habitual refers to customary or usual actions, the Progressive refers to on-going activity. Its use is restricted to non-stative verbs and thus is close to Comrie's definition of "progressive":

Thus we can give the general definition of progressiveness as the combination of progressive

meaning and nonstative meaning. Naturally, then, stative verbs do not have progressive forms, since this would involve an internal contradiction between the stativity of the verb and the nonstativity essential to the progressive.

(Comrie 1976:35)

Both the (Present) Habitual and the Imperfective differ from the Present and Past Progressive in that the Progressive involves no element of habituality. There is no indication that the action represented by the Progressive is considered a usual activity.

The present progressive is formed with the auxiliary *co* and the infinitive form of the verb.

(32) Present Progressive

```
L   L  HH    H  L  LH
o co lEEngndo yikpaa
```
Pro Aux machete sharpen
'She is sharpening the machete.'
```
L   L  LL H    LL LH
o co lEuwong bEEsia
```
he Aux branches remove-Pl
'He is cutting off the branches.'

As shown in the examples above, the tone on *co* is Low and the final tone on the infinitive is High, as in the citation form.

The Negative Present Progressive appears with a High on the auxiliary *co* and the verb appears in its truncated form without the infinitive marker.

(33) Negative Present Progressive / Negative Future

```
L  H  HH    H  L  L  H
o co lEEngndo yikpa le
```
Pro Aux machete sharpen Neg
'She is not sharpening / will not sharpen the machete.'

```
L   H   LL  H      LL  LL   H 17
o co lEuwong bEEsia le
he Aux branches remove-Pl Neg
'He is cutting off the branches.'
```

The Future is negated in the same way (see discussion below).

6.1.2.7 Past progressive

The form of the Past Progressive is identical to that of the Present Progressive except that the auxiliary *wa* replaces the auxiliary *co*.

(34) Past Progressive

```
L   H   L     H   LL   L  LL   L H
o wa wangnda kuindikuindio
he Aux people hit-Pl
'He was hitting the people over and over.'
H   H   LLL  LH   F   F   H  H   H H    F   H   LHH   H   H
i wa tueiyOO wO-wO kE, i sina nyE wa suEi yo le
I Aux hear     Idph but I know thing Aux talk Prt Neg
'I was hearing a falling sound but I couldn't tell
what was making the noise.'
```

The Negative Past Progressive is indicated on the verb by a vowel change: *wa* becomes *we*.

(35) Negative Past Progressive

```
L   L   H   L   H   L  LH   H      H
tamba we wallo tosaa long le
Tamba Aux work do     there
'Tamba wasn't working there.'
L   H   L     H   LL   L  LL   LH   H
o we wangnda kuindikuindio le
he Aux people hit-Pl         Neg
'He was not hitting the people over and over.'
```

---

[17]   The infinitive form of <u>bEEsia</u>, although segmentally identical to the form here, differs in that the final vowel (<u>a</u>) has a High tone associated with it.

As with all negative constructions, the negative particle
le appears clause finally.

6.1.2.8 Future

The future in Kisi has modal as well as tense value. The
Future, as a tense, indicates that the action will take
place after the moment of speech. As a modal it conveys
`intention' or `desire' on the part of the subject.

In Kisi, the Future is formally similar to the
Progressive. In fact, for some speakers there is no
contrast between the Progressive and Future. (There is no
contrast for nearly all speakers between the Progressive
Negative and the Future Negative.) For those speakers
with a formal distinction between Progressive and Future,
the Future is formed by dropping the infinitive suffix and
using the truncated infinitive after the auxiliary *co*.

(36) Future

```
L   H    H   H  H   HH  R
o  co  ndu  kona  doonOng
he Aux him message pour-forth-Mid
'He will relate the message to him.'
L   L   L   R    H   H LH  H   HL   LH
o  co  kandOng  o  cimEiyo  hoo  coo
he Aux start-Mid Prep Friday this Post
'It (the work) will be started this Friday.'
L   LL   H     H   L   L   L   F
o  kiolnung  wO,  o  co  cO  sung
he bite-Mid Prt, he Aux see later
'Let it bite itself, it will see later.'
```

That it is a truncated form of the infinitive is shown by
verbs with the Middle extension, as in the first two
examples above. The infinitive with the Middle extension

often ends in *-Ong* (with the marker *-ndo*). The form used
elsewhere in the verbal paradigm is not *-Ong* but rather
ung. The third example features a verb ('see') whose
infintive is *cOO* and whose elsewhere form is *cE*; we see
again how it is the truncated form of the infinitive (*cO*)
that is used to form the future.

In the case of the verbs below, the infinitives are
basOngndo and *bEEsOngndo*; the elsewhere forms are *basung*
and *bEEsung*.

(37) The truncated infinitive in the Future

```
L   L   L  R              L   L   LL  R
o co basOng               o co bEEsOng
He Aux sweep-Middle       he Aux sweep-Middle-Plural
'It will be swept.'       'It will be swept and swept.'
```

Both of the forms used in the examples above are derived
by deleting the suffix *-ndo* from the infinitive.

But the formal contrast between the Future and
Progressive is not present in all speakers. The first
example shows that speakers will use the truncated
(formally) Future form (*cum* vs *cumndo*) for Progressive
meaning. In the second example just the opposite occurs.
The formally Progressive (*hunOO* vs Future *hung*) is used
for future meaning even after the first verb is in the
formally Future (*ciikiang* vs Progressive *ciikiangndo*)

(38) Formal Future as semantic Progressive

```
   LL   H   LL   H      H   L  HL  L   L   L   LLL  H        L   L
   saa ni, sia ni, nda fala-a, a co wO besubesong wO cum
```
Saa Foc, Sia Foc, they Fala-them, they Aux still leftovers
still await
'Saa, Sia, Fala and others (bearing some relation to Fala)
are still waiting for the leftovers.'

Formal Progressive as semantic Future

```
   L   L   LL  HL      HH  L   L   L  LL   H
   ng co ciikiang 100 ng co hunOO wo
```
we Aux see   time we Aux come Prt
'We will see each other when you (will) come.'

Thus it seems that the formal distinction between Future

and Progressive may be collapsing.

The Negative Future is identical to the Negative

Present Progressive. Below I give one example of a

Negative Future that is formally identical to the Negative

Progressive.

(39) Negative Future / Negative (Present) Progressive

```
   L   L  H  LL   H  H   H   L  L  R       HH   H   H   H   H  L   H
   o dimi maa ya i co fEfElang fuu, kE, i co sOla le
```
he say that me I Aux stay   Idph but I Aux get Neg
'He says that I'm staying futilely for I will not get
(it).'

When subjects were asked to give, 'He will not ___.', they

often did not give the *co* form, but rather the General

Negative. It may be that the Future Negative may not be a

meaningful semantic distinction for most Kisi speakers.

A small class of commonly used verbs prefix what in

some cases can be interpreted as a Noun Class Marker.

(40) Some verbs with apparent prefixes

Fut   Prog

L   L   L H
la-kO   *kOlang*   (*kO* + *lang*)   'go'

L   L L   L L H
i-hini   *hinilang* (*hini* + *lang*) 'lie down'
L   L L   L   H
i-sisi   *simndang* (*sim* + *lang*) 'stand'

L   L   L L H
i-sO   *suEi*   (*sO* + *i*)   'say'

In the first example, the prefix *la* belongs to the same
class as the suffix -*lang* (NCM of the <u>la</u> class), but the
same is not true for the second and third examples. In
the fourth example "agreement" is once again shown; both
the prefix and the suffix belong to the <u>i</u> class. Perhaps,
as with some of the prefixes on nouns, the prefixes on the
verbs register the earlier presence of a prefixing system.

6.1.2.9 Future Progressive

The Future Progressive is formed with the auxiliaries
co and *wa*. I first give several forms for the verb
simndang 'to stand': the Present Progressive, the Past
Progressive, and the Future Progressive.

(41)   Future Progressive

L L   H L L H   L L   H L L H
saa co isisi   *saa wa isisi*
'Saa is standing.'   'Saa was standing.'
L L   H L L L H
saa co wa isisi
'Saa will be standing.'

```
H  H  L  LL   L  L  H    L  H
i co wa diomnde numndeng cumndo
I Aux Aux word  your     wait
```
'I will be waiting for your word.'

We thus have a tripartite division of the Progressive as

to tense: Past (with auxiliary *wa*, Present *co* and Future

co wa).

6.1.2.10 Present Perfective

The Present Perfective is expressed periphrastically

by using *ning F*, a word which in other contexts can be

translated as 'now, already'. As mentioned above, the

default tense associated with the Perfective is Past. The

particle *ning F* is used to convey that the action took

place recently or in the immediate past, rather than in

the indefinite or unspecified past conveyed by the

isolated Perfective. Although *ning F* is used primarily

with active verbs, it can also be used with stative verbs.

With stative verbs, the Present Perfective conveys that

the state is closely related to the present, is in effect

right now, it is of "current relevance" (see L. Anderson

1982 and references there).

(42) Semantics of *ning F* forms

```
LL H     F   L  L F   H   H H   H  L LH
mEEyang mang ma co ning bOnggilOng a sOsaa
breasts these Pro Aux PP drawn-in with sucking
```
'These breasts have become withered with nursing.'
```
LL  H LL  L   H  HL HH R    H   H L H  L  L H  F
nEi yimbaa kong co nEi keinang te, fandole, o tambu ning
road bushy that Cop road pass Neg  because Pro spoil PP
```
'That bushy road is impassable because it is ruined now.'

```
          LH  LL  H      F    L  R    H  H  H  H R      F    HHL  H
      mEE maalong mung cunOngndo ko ng cunung ning nuaa ni?
     then rice    this beat-Mid just Pro beat-Mid PP thus Foc
     'Is it this rice that has already been beaten?'
```

As will be seen below, *ning F* is not yet a full-fledged

member of the TAM system. The semantics of the Present

Perfective are close to what Welmers calls the

"completive".

> The reference [of the completive] ... is to the
> present effect of an action: 'he has become tired
> (and therefore is tired now)', 'he has eaten (and is
> therefore full or at least not about to eat again)',
> and the like. Obviously the action or process that
> has such a present effect is normally something in
> the recent past.
>
> (Welmers 1973:350)

One justification for including *ning F* in a discussion of

TAM can be seen by contrasting it with a near synonym.

There is another word for 'now', *sunsung HL*, which also

means 'immmediately' or 'right away', but the closeness to

the present with this word is in the other direction,

towards the future. It is a reduplicated form of another

time word *sung F*, which means 'later, soon, in the

future'. The tense particle, on the other hand, does not

refer to any future "now", but rather a past "now", one

that has already taken place. The former could be used

with the Future but *ning F* could not.

> (43) *sunsung HL* with the Future

```
    H   H   H    L L    H H      H  HL  LL LL H  L    H   L
    i  co num yelengyelengndo hoo kiolOO o hol sungsung
    I Aux you craziness       this cut   from face now
  'I will remove this craziness from your face right now.'
```

Sunsung HL also shows none of the allomorphy with the verb exhibited by *ning F*. The latter has an allomorph of *[nding]* after nasals (see Chapter 3: Phonology for a full discussion).

(44) The *[nding]* allomorph of *ning*

```
L  L H F      F    L    L
o mEsElang [nd]ing fangga
it small    Tense   very
'It's now very small.'
```

```
L  L F      F   H    H
o kilang [nd]ing nang pa
it start-Mid PP here Idph
'It has long ago been started.'
```

```
L  L  F      F    H H   L H  H L   L   L H H
i kinging [nd]ing kpou, mEE le i pOmbuEi
Pro fell-Mid PP all,   except for Pro small
'They had all been felled, except the smaller ones.'
```

That *ning F* has a close relationship to the verb is shown by the fact it undergoes some allomorphy unlike other phonologically similar words in the same environment. The syntax of *ning F* is more restricted, for it usually occurs immediately after the verb (or auxiliary).

In sum, then, we see a lexical item being incorporated into the verbal system to convey a tense contrast not immediately available within a basically aspectual system.

That it is an incipient particle and not fully integrated into the system is shown by its being used with other inflections, such as the Habitual and Past Progressive. The first example is in the Present Perfect (tones of LLF on the verb), and the second shows the

particle used with the Habitual (tones of LLL on the verb).

(45) *ning F* used with other verbal dictinctions

```
L  LL    F     F
le beenggung ning
it stir-Mid-Perf PP
'It (the stew) has already been stirred.'
L  LL    L     F
le beenggung ning
'It can be stirred now.'
```

```
L  LL H   H  LL H    L  H F   L  H
o vEilul la mEEleng, le wa ning lullo
he suck   me breast   it Aux PP  leak
'He sucked my breast, [and] it was leaking.'
```

The sense of the second example is that the stew is now capable of being stirred on a regular basis; it is stir-able. The second example shows *ning F* with the Past Progressive. Here the *ning F* conveys something of the sense of current relevance.

Another incipient aspect particle is *wO L* 'still, yet'. Although sentences with *ning F* can be negated simply by using the Negative Particle *le* (and retaining *ning F*), the particle *wO L* often replaces it.

(46) Uses of *wO L*

```
L  L    F          L  R    L  H
o hing ning        o hing wO le
she come now        she come yet Neg
'She has now come.'  'She has not yet come.'
```

The particle *wO L* also exhibits some allomorphy: [lO, ndO, yO]. For example, in the last example above, the phonetic form of *wO* would be [*ndO*]. A homophonous form has become a politeness particle affixed to the

imperative form, serving to soften the force of the demand
(see 4.10 Particles).

Both of these particles, *ning F* and *wO L* seem to be
on the way to what Heine and Reh call "desemanticization".

> ... a lexical item receives a second non-lexical
> function, which may ultimately become its only
> function. Thus, in addition to its lexical meaning,
> a word receives a grammatical function and can
> eventually develop into a grammatical morpheme.
>
> (Heine & Reh 1984:36)

The politness particle is particularly far advanced in
this direction (see also Kuryłowicz 1964).

6.1.3   Irregular or ablaut verbs

The verbs in this category are verbs which undergo
inflectional changes beyond the tonal changes which all
verbs undergo. Specifically, there are changes in the
vowels of these verbs, sometimes simply marking changes in
polarity, at others marking tense and aspect distinctions.
None of these verbs (in their non-extended forms) consists
of more than two syllables.

6.1.3.1   Quantitative remarks

Roughly fifteen per cent of the total number of verbs
(non-extended forms) examined show vowel changes. The
first and largest group is that involving back and front
alternations between the mid vowels, i.e., between *(i)o*
and *e*, and between *(i)O* and *E*. I will refer to this as
the "e/o group". A much smaller group involves comparable

alternations between the high vowels, *u* and *i*, the "i/u group". The final group involves alternations between items differing in polarity, an affirmative *a* becoming a negative *e*, the "a/e group". I give below rough percentages for each group.

(47) Verbs with stem vowel changes

Group	Percentage	N
e/o group	8.0	60/750
i/u group	0.3	2/750
a/e group	6.2	47/750
	14.5 %	109/750

It seems likely that some of the alternations here may represent the remnants of an earlier system. These alternations are also reflective of dialect differences (see Chapter 3: Phonology).

6.1.3.2 Phonotactic features of ablaut verbs

Disyllabic verbs belonging to this group are restricted to one type, those having *u* in their second syllable; monosyllabic verbs are not restricted in any way.

(48) Stems of ablaut verbs

Monosyllabic			Disyllabic	
kO	'go'		*kendu*	'be hard'
dOu	'pour, present'		tendu	'be awake'
hiou	'pass, surpass'		velu	'call'

bEng   `blink'
kel   `bite'
vem   `send someone'

I will now turn to the sorts of contrasts exhibited by
these groups of verbs.

6.1.3.3 Formal contrasts

Inflectional contrasts marked only by tone in other
parts of the language are marked here by changes in the
stem vowel (first vowel(s) of bisyllabic stems). The
complete paradigm has been given above; I list below the
characteristics of the formal distinctions (tonal
differences are not given), first for the *e/o* group, with
the most prolific changes, the *a/e* group, and finally the
i/u group. I have grouped together inflections which are
formally similar.

(49) Stem vowel changes in the *o/e* group

(Imperative) Perfective Hortative		Consecutive Habitual Imperfective			
Affirm Neg	Neg	Affirm	Neg	Affirm	
o	(o)a	(o)a	u/i	o/e	u/i
O	(O)a	(O)a	o/e	O/E	o/e
io	ia	io	ia	e	i
iO	ia	iO	ia	E	i

Stem vowel changes in the *a/e* group

a	e	a	e	a	e

Stem vowel changes in the *u/i* group

u	u	u	u/i	i	i

As can be seen, the greatest variety is among verbs with stems containing the mid vowels. The *a/e* group shows alternations only between Affirmative and Negative forms. The *u/i* group consists of only a few verbs and is included here only for reasons of completeness.

Below I give forms for two typical verbs from the *e/o* group.

(50) Examples from the *e/o* group

	Affirm	Gloss
Perfective	*dendu*	'be clean'
Habitual/Imperf	*diandu*	
General Neg	*dindu*	
Hortative	*diondu*	
Hortative Neg	*diandu*	
Perfective	*sEm*	'chew'
Habitual/Imperf	*sOam*	
General Neg	*sem*	
Hortative	*sOm*	
Hortative Neg	*sOam*	

An example of the alternations in the *u/i* group are given below.

(51) Examples of alternations in the u/i group

	Affirm	Neg (with *le*)	Gloss
Perfective	*pim*	*pim*	'be full'
Habitual/Imperf	*pum*	*pum*	(Imperf Neg only)
Hortative	*pum*	*pum*	

Below are examples of verbs in the a/e group; here the alternation is between *a* in the Affirmative and *e* in the Negative.

(52) Examples of alternations in the a/e group

	Affirm	Neg (with le)
'hang'		
Perfective	*baa*	*bee*
Habitual/Imperf	*baa*	*bee*
Hortative	*baa*	*bee*

6.1.3.6 Summary

If indeed we wish to see the alternations as comprising a unitary phenomenon, we must see two processes as being involved, Fronting and Raising. A back (rounded) vowel is basic and combinations of Fronting and Raising produce the different inflections. Because the identity of *a* is ambiguous as regards the Front-Back dimension (see Chapter 3: Phonology), Fronting is irrelevant and does not affect the vowel. Because *i* and *u* are already High, only Fronting may take affect. These processes, however, are of limited productivity and details will not be presented.

6.1.4 The verb 'to be'

With the verb 'to be' the two forms are *co* 'present' and *wa* 'past'.

(53) Suppletive forms of the verb 'be'

```
L  H  H    H
o co nang le
he be here Neg
'He's not here.'
L    H    L  L  L    L L   H H
mEngndang ma co ma nyulu kue
water     Pro be Pro cold Idph
'The water is freezing cold.'
```

```
L  LL  H      L   L   F      LH    HH  HL
```
biyOOlang la co ning bOO vaalio
seize-Pl Pro be now alot this-time
'There are many seizures at this time.'
```
LL    H    H
```
saa wa ni
Saa be Foc   'It was Saa.'
```
L   H   HH    LL  L
```
o wa naa kOOli
he be us behind   'He was behind us.'
```
LL  LL  H      L   L   HH
```
bOOluulang la wa bOO
noise   Pro be a lot 'There was a lot of noise.'
```
H   H   H    HLL  L   LL  R      H   H   H   L   H   L   H       H
```
i kendi siauma diuwang, ma wa o yOmndo bolleng ndang
I pick oranges ripe   and-they be Prep tree head Prt
'I picked the ripe oranges, which were at the tree's top.'

In the Negative *co* receives a High while *wa* becomes *we;*

the latter change parallels the change of that featured by

the *a/e* group discussed above. The form *wa,* as the Past

of *co,* may be related to a full verb, meaning 'remain,

stay'.

6.2 Verb extensions

That the system of verb extensions (VE system) should be treated as part of the inflectional morphology is slightly problematic. As has been noted in most discussions, the difference between inflectional and derivational morphology is a gradual, not a discrete, one. Corbett (1987) has even claimed that we should abandon any distinction between the two (cf. Anderson 1982).

If the changes due to tense, aspect, and modality can be considered a non-controversial example of inflectional morphology, the suffixing of verb extensions is slightly less so. In terms used by Bybee (1985), verb extensions do not have the *relevance* of tense, aspect, and mode, nor do they have the *generality* (cf. Kuryłowicz 1964). The *semantic* change due to the affixation of verb extensions is also greater. It is further true that verb extensions have fuller phonological substance. All of these factors tend to place verb extensions further along the continuum towards derivational morphology but not far enough to qualify them for membership in that category (cf. Corbett 1987:327)[18].

---

[18] Sapir considers verb extensions in Diola-Fogny to be "derivative verb markers" but also "secondary verb markers" (contra inflections in TAM) (1965:51) and part of derivational morphology.

6.2.1 What is a verb extension?

The term "verb extension" is one which has been used

by Bantuists to denote a morpheme attached to a verb stem,

thereby modifying the meaning of the verb. I give below

some examples of the Causative verb extension[19] from Fula,

an Atlantic language spoken from Sénégal to Cameroun.

(54) The Causative in Fula

annd			`to know'
annd + n	-->	*anndin*	`to inform'
hoy			`to be easy'
hoy + n	-->	*hoyn*	`to make easy'

<div align="right">(Arnott 1970:185)</div>

Voeltz (1977:58) points out that verb extensions can

perform the following functions.

(55) The functions of verb extensions

Benefactive	`do for somebody'
Associative	`do together'
Frequentative	`do often'
Directive	`motion towards, to'
Potential	`can do, do-able'
Stative	`be done (not by someone)'
Reversive-stative	`be undone (not by someone)'

As is suggested by the final example ("Reversive-

stative"), verb extensions can combine, thus considerably

expanding the range of possibilities suggested by the

simple listing of functions.

Some further examples from Fula show the effect of

these verb extensions.

---

[19]   Arnott calls them "radical extensions" (Arnott
1970).

(56) The Reversive, Associative, and Distantive in
Fula

mabb	'close'	Reversive *it*	*mabbit*	'open'
war	'come'	Associative *d*	*ward*	'come in company'
jood	'sit'	Distantive *oy*	*joodoy*	'sit over there'

Arnott rightly considers these affixes to constitute a

system separate from tense, aspect, and modality, and I

follow his practice here[20].

6.2.2 Discussion of the literature

The earliest study of verb extensions is the

comparative work on Bantu by Meinhof (1895, 1896). More

recent work is Voeltz 1977, where a full discussion of the

literature can be found. Voeltz's diachronic approach

enabled him to reconstruct ten extensions for all of NKC.

Languages can have many more affixes than this however.

For example, Sapir finds eight "productive" and seven

"unproductive" extensions in Diola-Fogny/Kujamutay

(1965:51,55).

Another recent work, Trithart 1983, examined the

"applied" (or benefactive affix) in Bantu. Trithart

discussed the range of functional possibilities

instantiated in the daughter languages. Moshi (1985)

looked at the semantics of the Swahili verb extension

system from a discourse perspective.

---

[20] Welmers 1973 has a different perspective on the
status of verb extensions. Welmers treats verb extensions
as just another inflection, such as tense or aspect, the
opposite to the approach adopted here.

Doneux 1975 contains recent work on verb extensions within the Atlantic Group of languages. Among other reconstructions, Doneux posits five verb extensions reconstructible for Atlantic in general. His data, however, are restricted to only Northern Branch languages, Kisi, of course, belonging to the Southern Branch.

6.2.3 Typological comments

That verb extensions are reconstructible for the NKC languages shows that they are not a "recent" areal phenomenon[21], as are, for example, serial verbs. It has been noted, however, that decay of both the noun class systems and the verb extension systems is indeed areal (Voeltz 1977:73).

Not unexpectedly, then, there has been some phonological erosion as well as semantic evolution within the system of Kisi verb extensions. After discussing the Kisi system in general, I discuss each extension individually, presenting the formal characteristics, the semantics, and the syntactic repercussions of each extension.

---

[21] Givon (1971) has proposed that verb extensions originally came from verbs. Such a proposal would involve considerable time depth and seems unnecessary in the light that Voeltz has shown how verb extensions are reconstructible for all of NKC.

6.2.4 Verb extensions in Kisi

In Kisi there are four formally different verb extensions, all of which can be isolated as separate morphemes adding to the segmental (and in one case tonal) content of the verb. Usually they are realized as suffixes, appearing after the stem and before the infinitive marker.

The functions of these verb extensions are variable and multiple. I call them by the somewhat unsatisfactory names, "Causative", "Benefactive", "Middle", and "Plural". At the least these labels should serve as convenient mnemonics, suggesting a number of semantic possibilities, rather than restricting each extension to a narrow semantic range.

6.2.4.1 Formal criteria

To qualify as a verb extension (VE), a morpheme must possess phonetic substance and recur with definable semantic content. In other words, it must be analyzable as a separate morpheme. Furthermore, verb extensions are bound morphemes and are inflected along with the stem for tense, aspect, and mood. The examples below show how the infinitive of the extended forms has the same tone pattern as the infinitive of the base form.

(57) The infinitive of the base and extended forms

L LH
bangaa   'to redeem, redeeming' (Base)
L L H
bangallo   'to redeem for someone' (Benefactive)
L LH
bangia   'to redeem repeatedly' (Plural)

L L LH
tombolaa   'to talk, talking' (Base)
L L LH
tombolia   'talking repeatedly' (Plural)
L L L H
tombolallo   'talking for someone' (Benefactive)
L L LL H
tomboliallo   'talking repeatedly for s-one' (Ben Pl)

The examples below show how the tone patterns remain the same in the infinitives. The forms below are in the Perfective. As will be recalled, the tone pattern for this form is LH; the tone on the pronoun is always a Low.

(58) Inflected forms of the base and extended forms

L L H
o banga   'She redeemed.' (Base)
she redeem
L L H   H
o bangal ya   'She redeemed for me.' (Benefactive)
she redeem me

L L H H
o tombola   'She talked.' (Base)
L L H HH
o tombolia   'She talked repeatedly.' (Plural)
L L H H   H
o tombolal ya 'She talked for me.'(Benefactive)
L L H HH   H
o tombolial ya 'She talked (pl) for me.' (Ben Pl)

There are clear formal differences, then, between the TAM system and that formed by verb extensions. One such difference is that in the former distinctions can be marked only by tone; tone is relatively unimportant for

contrasts among extended forms. In almost all cases, contrasts there are signalled by the addition of segmental substance.

The extensions are also different from the infinitive suffixes (see 6.3 below). Verb extensions affect the semantics of the verb and its argument structure; the infinitive suffixes only show that the verb is not marked for TAM and can act as a noun. In fact the infinitive suffixes are identical to the noun class suffixes in most cases. Verb extensions have no such relationship to suffixes within the noun class system. The syntactic difference is that the infinitive suffixes always appear after the verb extensions, further away from the verb itself.

In general the segmental alternations found in the VE system are no different from those found in the TAM system and will not be further discussed here. Their importance to the VE system is relatively minor.

6.2.4.2 Productivity

The system is not a fully productive one as compared to, say, the noun class system. Not all verbs allow the suffixation of all extensions, while all nouns may be analyzed as consisting of a stem and suffix. Furthermore, no one stem allows the suffixation of all extensions and all combinations of extensions. I have

suggested elsewhere that the difference in productivity may be important in understanding why the verb extension system has not been as actively renewed as has the noun class system (Childs 1987).

It has been noted that productivity correlates with "semantic coherence" (Aronoff 1976)[22]. This term refers to the predictability of the meaning of the derived form on the basis of knowing the meaning of the stem and affix. As will be seen below, the meanings of extended forms are relatively transparent in most cases. Metaphorical expansions are the clearest way in which meanings diverge from a strictly predictable sum-of-the-parts meaning (see examples below).

An example of the fullest formal realization of the system is given below. In the first column I give the logically possible combinations. In the second column I give an indication as to whether or not the form exists *anywhere* in the language, "yes/no". In the third column I present examples from the verb *hanggOO* 'to be warm'.

(59) Verb extensions

	Attested	Example	Gloss
Stem	yes	*hanggu*	'be warm'
Cs	yes	*henggi*	'make warm'
Ben	yes	*hanggul*	'warm for someone'
Mid	yes	*hanggung*	'warm oneself'

---

[22] Aronoff claims that "productivity" can only be relevant to features belonging to a single morphological class, yet it seems useful to extend the notion here.

Pl   yes

Cs + Ben	yes	*hEnggil*	`warm for someone'
Cs + Mid	yes	*hEngging*	`be made warm '
Cs + Pl	yes	*hEEngguu*	`warm many things'
Ben + Mid	yes		
Ben + Pl	yes		
Mid + Pl	yes		

Abbreviations

Cs + Ben + Mid	yes
Cs + Ben + Pl	yes
Cs + Mid + Pl	yes
Ben + Mid + Pl	yes

Cs = Causative
Ben = Benefactive
Mid = Middle
Pl = Plural

Cs + Ben + Mid + Pl   no

As can be seen, fourteen of the possible fifteen extended forms are actually attested. Three of the attested forms, however, are fairly rare, i.e., those involving a combination of Benefactive and Middle. The order of the morphemes is as schematized below.

(60) Morphotactics of verb extensions

Stem   (+ Cs) (+ Ben) (+ Mid) (+ Pl)

It is not clear why the co-ocurrence of the Middle and Benefactive extensions is rare[23]. Their meanings are not semantically or pragmatically anomalous, i.e., `some state of affairs existing or having been achieved with respect to someone (possibly by that same someone) for someone else'. Perhaps it is the fact that because the Middle is usually agentless and the Benefactive involves a human

---

[23]   John Singler (p.c.) finds that Klao (a Kru language spoken in Liberia) rejects the Ben + Middle combination, as well as several other combinations. Klao is developing a periphrastic benefactive, which is what co-ocurs with verb extensions.

benefactor, the status of the subject would be ambiguous. The reason for the lack of many examples of co-ocurrence might also be that they perform different functions with regard to the argument structure of the verb. The Benefactive adds an argument and the Middle subtracts an argument.

The situation is just as murky elsewhere. In his survey of Bantu extensions, Welmers writes,

> The morphotactics of extensions in succession may be complicated. Pairs such as the applicative [our Benefactive] and causative may appear in either order, with different meanings. A few restrictions are clear, however. The passive and the stative can only be the last extension on the base. The reciprocal may be followed by the applicative, causative, or stative, but not by others. At the present state of our knowledge, perhaps the best that can be said is that a great deal depends on the semantics of individual roots.
>
> (Welmers 1973:340)

As will be seen below, the effect of the semantics on verb stems will indeed be important for the system as a whole.

The system is clearly productive in the minds of Kisi speakers. Informants have no problems in providing extended forms. Furthermore, my own creations were rated as acceptable except when semantically anomalous. For example, I produced what I expected would be the proper form for the Benefactive of 'chew', i.e., 'chew for someone'. It was judged unacceptable until the appropriate scenario had been constructed, a mother masticating a tough piece of meat for her small child.

In the discussion which follows I present the following aspects of each extension.

1. Phonological: formal characteristics and morphophonemic details.
2. Semantic.
3. Syntactic: the effect of the extension on the number of allowable arguments.
4. Distributional: restrictions on which verbs an extension can occur with, restrictions on which other extensions an extension can occur with.

6.2.4.3 Base form

The "base form" is that form to which the extensions are affixed. As such, it has no marking to distinguish it from other (extended) forms except that it is at least as short (segmentally) as any of the extended forms and usually shorter. The situation in Kisi stands in contrast to that found elsewhere in NKC. A stative morpheme can be reconstructed for NKC (Voeltz 1977), but there is no evidence for such an extension in present-day Kisi.

6.2.4.4 Causative

The morphophonological form of the Causative morpheme is {i}. It is suffixed to the base, as shown below. The first example is the base form and the second is the base with the Causative affixed.

(61) The Causative

sul   'be rich or (sexually) mature'
suli   'make someone mature, to raise a child'

hol	'adhere, stick to, be leaning against'
holi	'make adhere, plaster, lean (st) against'
dendu	'be clean'
dindi[24]	'(make) clean'
tendu	'be awake'
tindi	'awaken'

The Causative is simply added on or replaces the second vowel of the Base. The one exception to this pattern is verbs ending with *a*. With these verbs the affix precedes the final vowel.

(62) The Causative with verbs ending in *a*

bEnda	'be agreeable or fitting'
bEndia	'make agreeable'
tosa	'do, make'
tosia	'fix, repair'

That the final *a* represents the remnant of another verb extension or verbal morpheme is possible. Synchronically, however, it has no semantic content.

The meaning of the Causative is comparable to causatives in other languages, 'make or cause something to be ___'[25].

(63) Causatives

```
L   LH    LL  H  L   L  LHH  L   LH
i cii laabela wOsiei i yaa
I finish-Cs Liberia years Pro three
'I spent three years in Liberia.'
```

---

[24] Stem vowel changes are unimportant to the discussion.

[25] In Kisi the Causative is a "true" causative and not what Comrie calls a "permissive" causative, i.e., the difference represented by the contrast between 'I made Saa go', and 'I let Saa go' (Comrie 1971:164).

```
L   R   HH HH   H  L L   H   L H   H   L H
o cu yaasaa mbo fuli nEnggElE-nEnggElE
```
he beat greens Conj-he mash-Cs Ideophone
`He beat the greens and mashed them finely.'

The semantics of the Causative likely limit the verbs to
which the morpheme may be suffixed, for it is certainly
true there are fewer Causative forms than any other. The
most probable candidates for the Causative are verbs with
stative meaning, such as most of the examples above.
Causative constructions can also be formed using the verb
tosa `to make'.

(64) Syntactic or periphrastic causative

```
L   L H  H  L      H L  L     26
o tosa mi tungndo o wu
```
he make Conj dog it die
`He caused the dog to die.'
```
L     H    F    L  L H  L  L H    L  LL LL   HH
mEngndang mang ma tosa mi taltang la tuusuu kpou
```
water this it make Conj bridges they fall-down all
`This (rain) water caused all the bridges to collapse.'

Syntactically the addition of the Causative allows another
argument to be introduced, namely that of agent or cause.
The agent occupies subject position and the patient that
of object.

The Causative is not quite so neat a category as the
discussion above might indicate. There is some messiness
in both the semantics and in the morphophonology. Many
active verbs appear only in what formally seems to be the
Causative, i.e., with a final *i*.

---

[26] There is also a lexicalized form of `to make die
or kill', <u>dii</u> `to kill'.

(65) Active verbs with superficially Causative
     suffixes

hɛi   'winnow'
luɛi   'enter'
kenɗi   'try'
kuisi   'vomit'
kpuusi   'recommence an altercation'
penggi   'peel'

For all of these verbs it is difficult to posit a non-

Causative form from which they might have been derived.

There are also obviously stative verbs which appear to be

formed along the same lines.

(66) Stative verbs with superficially Causative
     suffixes

wii   'die'
lali   'sweat'
luɛi   'be sharp'
pɛngi   'rest, remain'

These facts suggest that not all formally Causative forms

should be analyzed as Causatives.

Because of the possible confusion between Causative

and non-Causative forms both for semantic and formal

reasons, it is likely that Causative forms are often felt

to be basic, or at least no different from base forms.

That is to say, speakers have no difficulty in construing

formally causative forms as base forms. In languages of

the world there is often no morphological Causative.

> Because the semantic element *causative* makes a
> considerable semantic change in the event or state
> being described by the verb, and because the
> resulting meaning varies considerably according to
> the verb stem it is combined with, a morphological
> causative may be very general, but it is prone to
> lexicalization. In some languages it is totally
> lexical (and syntactic) as in English, and in others,

such as Luganda, it is morphological with many cases
of lexicalization.

(Bybee 1985:18)

The fact that the Causative may be interpreted as a base

form contributes to its widespread combination with other

extensions.

(67) The Causative with the Benefactive and Middle

Causative	*cuingi*	'spill'
Benefactive	*cuingil*	'spill for someone'
Middle	*cuining*	'spill by itself'

The situation is a little more complicated with regard to

the combinining of the Causative with the Plural.

Considerable confounding of the two verb extensions has

taken place. At times my informants would give me

Causative forms for the Plural, e.g., base: *weng* 'hide

(something)'; "Plural": *wingi* 'hiding repeatedly'.

Oaccasionally a form would be both Plural and Causative,

e.g., *piOsi* 'be broken'; *pesi* '(for more than one thing

to) be broken; break, make broken'.

The close relationship between the Causative and

Plural is found elsewhere in NKC. In Voeltz's

reconstruction of the NKC verb extension system, he posits

two Causative morphemes, the first of which also has a

Plural meaning.

The meaning of CAUSATIVE is considerably more
complicated than the label itself suggests. It seems
probable that the form here reconstructed also had a
FREQUENTATIVE meaning, 'do often', an INTENSIVE
meaning, 'do thoroughly, ?expertly', and a PLURALITY
of action / actor meaning, 'do to many, many do ...'

(Voeltz 1977:62)

About the second Causative he writes, "The difference in meaning between the two causatives is not clearly discernible" (Voeltz 1977:63). A collapsing of the two categories Causative and Plural, then, is not unknown among related languages, nor is it unknown in Indo-European (Kuryłowicz 1964). In Kisi the collapsing has repercussions on the entire system (Childs 1987). The matter of the confounding of the two extensions will be discussed in some detail below.

6.2.4.5 Middle

The term "Middle" has been chosen because of its potentially broad semantic range[27]. Although it is definitely not a "voice" in the traditional use of the term, it covers much of the same semantic ground as both middle and passive voices in languages with such distinctions (see also Friedrich 1974:S19 for the clustering of tense, aspect, intransitive and middle in one formal category). As will be seen below, the semantic range of the extension is even broader.

The fullest form of this morpheme is *nung,* as shown in the examples below.

---

[27] The suggestion to use this term was offered to me by W.A.A. Wilson and is used by Arnott for Adamawa Fulfulde (David Dwyer p.c.).

(68) *nung* allomorph of the Middle extension

dOu	'pour, present'
dOunung	'present oneself'
dii	'kill'
diinung	'kill oneself, commit suicide'
cal	'sit'
calnung	'seat oneself'
tuu	'measure'
tuunung	'measure oneself'
cOm	'show'
cOmnung	'boast'

The *nung* allomorph is found with all monosyllabic stems not ending in the velar nasal. When a stem ends in a velar nasal, the nasal cluster *ng-n* is simplified to either *ng* or (usually) *n*.

(69) Nasal cluster simplification

tang	'cross'
tEEnung	'cross on one's own, by one's own power'
sang	'sow'
sangung	'be sown'

After bi- and trisyllabic stems the morpheme is simply realized as *ng*.

(70) The *ng* allomorph with polysyllabic stems

fEEya	'cut grass and shrubbery'
fEEyang	'be cut'
bengi	'flog'
benging	'flog oneself'
weelu	'call'
weelung	'call oneself'
yambu	'lay down'
yambung	'lie down'
sanggalaa	'praise; construct scaffolding'
sanggalangndo	'praise oneself, brag'

In some cases because of phonological reduction, the middle can be differentiated from the base form only in the infinitive.

(71) Reduction of the Middle

		Infinitive
bang	'rap, hit, strike'	*bangOO*
bang	'hit oneself'	*bangndo*

A curious alternation found nowhere else in the language is between O and u, occurring between the infinitive (with its infinitivizing suffix, here realized as -*ndo*) and the form used elsewhere.

(72) Alternation between O and u

	Stem	*Middle*	*Middle infinitive*
'smell'	*cum*	*cumnung*	*cumnOngndo*
'turn'	*hing*	*hingnung*	*hingnOngndo*
'plow'	*waa*	*waanung*	*waanOngndo*
'bear'	*welu*	*wiolung*	*wiolOngndo*
'lay'	*yambu*	*yambung*	*yambOngndo*

This alternation occurs only when the full form of the Middle is realized or when the stem-final vowel is *u*, i.e., when the Middle has *u* as its second-syllable vowel.

A second interesting feature about the Middle is its tonal behavior. In its fullest realization the morpheme is realized with a rising tone. (The infinitivizing suffix always has a High associated with it.)

(73) The rising tone of the Middle infinitive

```
LL     R     H            LL R     H
hau + nOng + ndo    ->    haunOngndo      'get stuck'
base  Mid    Inf
LL   L    R    H           LL   R     H
faanda + ng + ndo   ->    faandangndo
'throw oneself, travel alone'
```

```
LL L     R    H           LL R     H
faasa + ng + ndo    ->    faasangndo
`to splatter or hatch by itself'
```

The latter two examples illustrate how the Rise persists

even if the segmental matter of the Middle is only the

velar nasal (which does not receive a tone). Presumably

it is unattached, "floating" in an autosegmental

treatment, and is later associated with the stem-final

vowel, overriding the already associated Low. The Rise

associated with the Middle has repercussions in the

finite forms of the Middle extended forms (see discussion

above in Chapter 3: Phonology).

The Middle covers a wide semantic range including

`passive'[28], `reflexive', `stative', and even overlaps

with the Benefactive.

(74) Semantic range of the Middle

Base	tendu	`be awake'
Caus	tindi	`awaken'
Middle	tinding	`awaken, wake oneself'

| Base | boli | `hurt (transitive)' |
| Middle | boling | `be hurt or injured' |

| Base | tofa | `look at' |
| Middle | tofang | `look at oneself (in mirror)' |

In some cases, because of the semantics of the verb, the

Middle makes little apparent difference in meaning.

---

[28] See Beedham 1987 for discussion of the passive
as an aspect.

(75) Middle verbs differing little in meaning from
base forms

hiou   'to pass (by or through)'
hiounung 'to pass by or through'

landu   'hang, be hanging'
landung   'be hanging'

I now give some examples of the Middle used in sentences.

(76) The Middle in full sentences

  L LH
cukaa   'prick or stick'
L H L H H   L L   L F
hali cuka ya   *hali cukang*
Hali prick me   Hali prick-Mid
'Hali pricked me.'   'Hali pricked himself.'
LL H H L H H LLH
saa cuka hali a yuEi
'Saa pricked Hali with a thorn.'
L L H F   H LLH
hali cukang a yuEi 'Hali was pricked by the thorn.'

  LH
too   'to wash'
H HH R
i toOnung
I wash-Mid
'I washed myself / fell into the water.'
H HH F   H LH
i toonung domaa
I wash-Mid shirt
'I washed the shirt for myself.'

  L LH
handOO   'to put or place'
L L F   HH H L L
o handung baa o lebol
'He placed a (his) hand on (his own) head.'

  L LH
helOO   'to mount or rise'
L R   L   H H   H
o hel yOmndo kengkeng
he climb tree Ideophone
'He scampered up the tree.'
L L F   HH HH H H   H H
o helnung coo-coo pili-pili
he mount-Mid high Ideophone
'He climbed way way up.'

```
LL LL H
```
hiiluuwo   'to shake'
```
L  H  L  LL R    H  H  L  L  L
```
billo co hiilOngndo yikpE-yikpE
grass Aux shake-Mid Ideophone
'The grass is shaking violently.'

The true sense of the Middle is that the subject is the recipient of the verb's meaning, and when the subject is animate, the subject can also be the inititator of the action of the verb. In the latter case the meaning is reflexive[29].

The active-stative distinction interacts only slight with the Middle. When the base form is active, the sense of the Middle is stative; and when the base form is stative, the sense of the continues to be stative.

(77) The Middle of active and stative verbs

Active:	*tEi*	'spread in the sun to dry'
	tEing	'be spread in the sun to dry'
	loo	'beat'
	loonung	'be beaten'
Stative:	*liwa*	'be wet'
	liwang	'be wet'
	loo	'be lost'
	lonung	'be lost'

---

[29] Reflexive constructions, in a number of unrelated languages, have come to acquire a passive meaning. Haiman points out that Langacker & Munro (1975:801) suggest that the reason for this polysemy of the reflexive construction is that in both reflexives and passives, 'the subject and the direct object are non-distinct' (Haiman 1983:796).

There are also some arguments for seeing the Middle as an "intransitivizer" (see Welmers 1978)[30]. Although it is true in many cases that the Middle serves to "intransitivize" verbs which are transitive, its functions are much wider than that suggested by Welmers' term.

In some cases the Middle functions as a true passive, despite the fact that the agent is rarely expressed. The function of the passive has been said to involve a

> conversion, or transformation, of a sentence in which the subject is represented as 'acting' into a sentence in which it is being 'being acted upon', or 'suffering the effects of the action'.
> (Lyons 1971:377)

The Kisi Middle qualifies both functionally and formally as a passive in Lyons' terms.

1. The object of the active sentence becomes the subject of the passive.
2. The active form can be considered more basic.
3. If the subject of the active sentence is expressed, then it takes the form of an adjunct marked as agentive.
   (Lyons 1971:376)

In the sentence below the agent does not require a preposition. (When an instrument is expressed, however, it is preceded by a preposition, as in the "thorn" sentences above.)

(78) Agent in Middle constructions

```
L   LL H     H  H H     H  HH H  HH   H
cimbOOlang la hEnang ndu lOO-o-lOO ni
fleeing    it like-Mid him always  Focus
'He always loves to run away.'
```

---

[30] This reference was pointed out to me by John Victor Singler.

When the agent is identical to the patient, as when the Middle is used reflexively, the agent is not expressed.

(79) The Middle used reflexively

```
L   LL  F    H R    L H
o hEinung kefong coo
he winnow-Mid chaff on
'He fanned chaff all over himself.'
```

We thus see that the Middle has a number of different functions, all of which will be subsumed under the appellation "Middle".

Insofar as the syntax of the Middle is concerned, an argument can be subtracted from the verb[31] as opposed to the way an argument can be added with the Causative. The two perform almost complementary functions with regard to the argument structure of the Kisi verb.

The Middle occurs with all other extensions, though less freely with the Benefactive than with all others. I give a few examples of that last combination.

---

[31] Sometimes an ostensible direct object or patient appears after verbs with the Middle extension, but such arguments usually function semantically as benefactees or the like.

```
L   L   R              L   L   R    H L
o bendung              o bendung saa
'He made a mistake.'   'He wronged Saa.'
```

When we consider the second sentence as paralleling the first sentence, it is clear that 'Saa' is a lower argument implying that a better gloss might be, 'He made a mistake with respect to Saa.' Furthermore, the meaning of the base verb, biondOO is 'to miss, as an animal trap would, to make a mistake'. It is the pronoun subject that is the recipient of the verb's action, not 'Saa'.

(80) The Middle and Benefactive

Base	*susu*	`roast'
Ben	*susul*	`roast for someone'
Mid	*susung*	`be roasted, roast itself'
Ben & Mid	*susulung*	`roast itself, get in a warm place'

Base	*bindi*	`shoot, flash, explode'
Ben	*bindullo*	`shoot for someone'
Ben & Mid	*bindulOngndo*	`shot for someone'

Base	*dimio*	`say, tell'
Ben	*dimullo*	`say to or tell (someone)'
Ben & Mid	*dimulOngndo*	`say to oneself, be told'

As was true with the Causative, there are verbs resembling Middle forms but without base forms from which they might have been derived.

(81) Verbs resembling verbs with Middle extensions

ciikang	`meet'
fuundang	`snort, inhale'

Semantically, many stative verbs, as was indicated above, resemble verbs with Middle extensions.

6.2.4.6 Benefactive

The fullest form of the Benefactive is *lul,* as shown in the examples below.

(82) *lul* as the Benefactive

cuu	`carry'
cuulul	`carry for someone'

yau	`cook'
yaulul	`cook for someone'

pei	`fill'
peilul	`fill for someone'

After monosyllabic open syllables the full form of the Benefactive is realized.

When the stem ends in *m*, the first *l* of the suffix disappears.

(83) The Benefactive after -*m*

yim	'break (wood)'
yimul	'break for someone'
wem	'send (someone)'
wemul	'send (someone) for someone'

After the velar nasal -*ng* and after -*l* the entire morpheme can disappear.

(84) The Benefactive after -*ng* and -*l*

yOng	'send'
yOng	'send to or for someone'
cang	'cry'
ceng	'cry to or for someone'
yil	'greet'
yil	'greet for someone'
cal	'sit, be seated'
cel	'sit (on) for someone'

When there is no vowel change, as in the first and third examples, the only way the base form and the Benefactive may be distinguished on a formal basis is by eliciting their infinitives. The base form has a suffix of -*O(O)* and all extended forms have the sufix -*o*.

(85) Infinitives of Benefactives and base forms

	Base form	Infinitive
'send'	*yOngOO*	*yOngndo*
'greet'	*yilOO*	*yillo*

When the benefactive is affixed to a disyllabic verb ending in a vowel, the morpheme is reduced to *l*.

(86)   The Benefactive after vowel-final
         disyllabic verbs

banga   `redeem'
bangal   `redeem for someone'

cuingi   `throw away (a liquid)'
cuingil   `throw away for someone'

yOnggu   `give, deliver, send'
yOnggul   `give something for someone'

In the Benefactive there is seemingly free variation

between *i* and *u* when representing the Benefactive

morpheme[32]. Not all verbs show such alternations, and

not all speakers distinguish the forms given below.

(87) Alternation between *i* and *u* in the Benefactive

L L H   L L H
dindullo / dindillo   Ben of diondOO `to be clean'  `to
                             clean by wiping or washing for
                             someone'.
L L H   L L H
hElillo / hElullo   Ben of hElio `to select'. `to
                             select for someone'.

---

[32] Another alternation that occurs with Benefactive
forms is between *a* and *e*, but since this alternation is
in the stem vowel I will not discuss it here. This
alternation is part of a more general phenomenon (see
"Ablaut verbs" above). I give several examples below.

L L H   L L H
handullo / hendullo   Ben of handOO `to place over''.
                             `to place something for someone'
L L H   L L H
fangallo / fengallo   Ben of fangaa `to move or
                             remove' `to remove something for
                             someone'
LL L H   LL L H
waalullo / weelullo   Ben of waa `to plow or hoe, to
                             squeeze (palm nuts)'

This stem-vowel alternation can be found in other extended
forms and occurs only when *a* occurs in the base form.

Several explanations suggest themselves. The alternation may be a remnant of a vowel harmony process not uncommon in this part of Africa (Heine & Reh 1984:18). A comparable alternation between mid versus high and low vowels exists in Swahili also with the Benefactive extension (often known as the "applied" or "prepositional" affix). On the other hand, it may be a process not yet grammaticalized. As such it may have its source in the interaction between the *i* of the Causative and the *u* of the Benefactive.

The meaning of the verb with the Benefactive affix is usually 'the action or state has been performed or achieved with reference to someone, usually, but not necessarily, for that person's benefit'. Some examples illustrate the variety in the quality of the experience for the recipient.

(88) Semantics of the Benefactive

dengi	'yell'
dengul	'yell at or for someone'
sangga	'be exhausted, suffer'
sanggal	'suffer under someone'
wuu	'throw, shoot'
wuulul	'throw to or at someone'

Considerable expansion or extension of meaning is possible with the Benefactive.

(89) Semantic expansion of the Benefactive

yil	'greet'
yil (Ben)	'greet for someone; arrange for the marriage of one's child'

yeela	`be sweet'
yeelal	`be sweet or appealing to someone; discuss a topic of particular interest to one's interlocutor'

Because of the semantics of the base form, there is sometimes little difference in meaning between it and the Benefactive.

(90) Benefactives with same meaning as base form

yoola	`help'
yoolal	`help'
yOng	`send something'
yOng (Ben)	`send something'

Another aspect to the semantics of the Benefactive is that it can perform something of a possessive function. In such situations it indicates some connection between the benefactee and the following argument beyond that of the action of the verb.

(91) The Benefactive showing possession

```
L  LL H    H  H LH
o woulul ndu domaa
he put-Ben him shirt
`He put his shirt on.'33
```

```
L  LL H   H  LL H     L  H  F   L  H
o vEilul la mEEleng, le wa ning lullo
he nurse-Ben me breast, it Aux now leak
`He sucked my breast, (and) it was now leaking.'
```

This association of the Benefactive with possession is not unexpected, for if an action has been performed for a person, it is likely that that person has some previous connection with the recipient of that action.

---

33   The pronouns are not necessarily coreferential.

Sometimes the Benefactive merely indicates that the additional argument was aware of the verb's action.

(92) The benefactee as observer

```
L  LL H   H H  LHH
o yaamal la a yiaang
she yawn-Ben me with hunger
'She yawned with hunger to me.'
```

```
L   LL H   H  LH  LH
o yeemal la saa bOO
she want-Ben me Saa a lot
'She wanted Saa very much (it was apparent to me).'
```

```
 LLL H    L  L H   H  LH
muEiyang ma wowil la saa
liquor    it faint-Cs-Mid Saa
'The liquor caused Saa to faint (I saw).'
```

Due to the pragmatics of the Benefactive, the benefactee as well as the agent are both usually human, or at least animate, but not necessarily so.

(93) Non-animate benefactees and actors

```
L  LL H   L  H  L   H
o kaafal yOmnde cingnde
he tie-loosely-Ben wood teeth
'He showed his teeth to (grimmaced at) the wood.'
```

```
H  LH L  L  H  H H   H  HL  HH LH
halaa o tenggal la long ya kua fEEyaa
cloud it dissolve-Ben me Conj I go cut-down-grass
'The clouds should clear up for me so I can go brushing.'
```

In the first example above we see the benefactee serving something of a locative function, as hinted could be possible earlier.

In summary, then, we have seen that the semantics of the Benefactive involve the action's being performed with an effect on another entity, typically a person. This

relationship allows for the incorporation of another

argument, namely the benefactee.

The benefactive function need not necessarily involve

the Benefactive extension.

(94) Benefactive function without the extension

```
LL   HH   H   LL  L  HH   H   LH   H   L  H   L   LH
saa baa ya sOOlEmaa le sia le doma kumbaa
Saa hang me noise    for Sia for shirt Kumba
Saa nagged me about [getting] Kumba's shirt for Sia.'
```

```
L   L  HHH   H   LH      F  H    F  H
o kpatiaa ya soong kpato-kpato
he crush-Pl me fingers Ideophone
'He smashed my fingers.'
```

In the first example the preposition le ('for') expresses

the type of relationship conveyed by the Benefactive, and

in the second it is handled by the sentence's syntax and

the semantics of the verb.

As with the other verb extensions, there are verbs in

the form of the Benefactive with no corresponding base

form. I give some examples below.

(95) Candidate Benefactives

womul	'spin cotton'
yOngul	'poison'
lendul	'pawn'
komal	'come to, meet'
tumul	'become rotten'
cukul	'itch'

As can be seen, some of these verbs have a semantic

component comparable to the Benefactive. Besides lacking

a formal base form, some of these verbs allow the

affixation of the Benefactive verb extension, e.g.,

womulul 'to weave or spin (cotton) for someone (Ben)', and

other verb extensions, *yOngulang* 'to hurt or poison
oneself (Mid)'.

There are no absolute restrictions on which other
extensions the Benefactive can co-occur with. The
Benefactive does, however, have a particular affinity for
the Causative, as was mentioned above with regard to the
alternation between *i* and *u*. The Causative allows for the
incorporation of another argument, the agent. The agent
is prototypically human and animate, the sort of entity
that would likely "benfit" the benefactee in a Benefactive
construction. This affinity, however, does not mean that
the Benefactive is not allowed to co-occur with other
extensions. In fact, the only restriction is that it
infrequently occurs with the Middle.

6.2.4.7 <u>Plural</u>

The Plural exhibits more complexity than any of the other
extensions. Not only does the meaning of the Plural vary,
but also its form, sometimes in not entirely predictable
ways. There is a further problem in that some verbs have
identical forms for the Plural and Causative.

There are basically three ways to form the Plural,
the first of which is by vowel lengthening. With this
type of pluralizing, the stem vowel is lengthened and the
second syllable ends in *-uu*. If the verb is monosyllabic,
as in the first example, *-uu* is added. If the stem ends

in -*u*, the vowel is lengthened, as in the latter two examples.

(96) Pluralization by vowel legngthening

ting	'to start an argument'
tiinguu	'to start many arguments'
candu	'to praise'
caanduu	'to praise effusively'
nangu	'bend'
nEEnguu	'bend multiply, discuss'

Vowel lengthening can be accompanied by the insertion of *i* before a stem-final *a*, as the same vowel was inserted before *a* with the Causative.

(97) Pluralization of a-final stems

sOla	'get'
sOOlia	'get again and again'
tenga	'melt, dissolve'
teengia	'melt multiply'
yasa	'scratch, uncover'
yaasia	'scratch many times'

This is the first hint of a relationship between the Plural and Causative.

Stem vowels already long remain long.

(98) Pluralization of stems with long vowels

bEEsa	'to trim'
bEEsia	'to trim repeatedly'
yoola	'to help'
yoolia	'to help repeatedly'

The second most common way of pluralizing verbs is by full reduplication of the stem.

(99) Pluralization by reduplication

lau	`struggle, be anxious'
laulau	`struggle repeatedly'
dengi	`yell'
dengidengi	`yell repeatedly'
nyindu	`push'
nyindunyindu	`push again and again'

There seem to be no restrictions on this process for verb pluralization. Some verbs that are pluralized by the first method can also be pluralized in this way, and thus appear as "double" plurals.

(100) Double plurals

L L H *bangOO*	`to close or shut; to nail'
L L H *bengio*	`to lock or close (pl)'
L L L L H *bengibengio*	`to lock or close (<u>double</u> pl)'

The transparent iconicity of this process probably explains its productivity. Reduplication is a process that is used throughout the language, usually in an iconic way. In fact, reduplication universally represents such concepts as plurality (Moravcsik 1978).

Reduplication is not restricted to verb pluralization. For example, the distributive function is realized by means of reduplication and a morpheme consisting of *o H* between the stems.

(101) Reduplication in the distributive

L H *sO + o*	`chicken'
L H L *sO + o + sO*	`every chicken'

To convey intensity or repeated action, reduplication is commonly used with adjectives, ideophones, adverbs, and verbs.

(102) Other uses of reduplication

nyEmbo	'small'
nyEmbo-nyEmbo	'very small'
ca	'to the top'
ca-ca	'to the very top'
dOngu-dOngu	'for a long time'
dOngu-dOngu-dOngu	'for a very long time'
tao	'a lot'
tao-tao	'an awful lot, everywhere'
kOlang	'going'
kOlang-kOlang-kOlang	'going on and on and on'

In an earlier paper (Childs 1987), I suggest that the processes of reduplication and vowel lengthening are formally as well as functionally related.

In fact there is a full continuum of formally different reduplicative processes in the world's languages (see Yip 1982). This continuum exists with respect to verb pluralization. A process of verb pluralization that is midway between the two in Kisi is found in Klao (a Kru language spoken in Liberia). In Klao "plural", which is usually reciprocal, involves a verb extension *le*, but also requires a preposed copy of the first consonant and vowel of monosyllabic stems e.g., /plo/ 'divide' becomes /po+plo+le/ 'sell'(Singler, p.c.). From a diachronic perspective, of course, it is likely a process such as lengthening arose from reduplication with the fully

reduplicated forms having experienced phonological erosion (see also Marantz 1982).

That the language has two formally different, yet productive, ways of pluralizing is curious. What is more surprising is that there is a third way of pluralizing verbs, although it is not so clearly part of the verbal system. It is more closely related to the system of noun class suffixes.

The third way verbs can be pluralized is by adding the noun class suffix *-lang*. The noun class denoted by this marker includes the plurals of most inanimate things. It is something of a default plural marker as well; when informants were unsure of a noun's plural, they would often give a *-lang* suffixed form before settling on the actual verbal plural. Besides denoting the "plural of most inanimate things", the *-lang* suffix constitutes a class containing,

    1. the plural of most structures, articles of daily
    use, and many parts of the body
    2. the plural of things that exist in pairs
    3. abstract nouns formed mostly from verbs
                                        (Heydorn 1971:190)

Borrowed words (nouns) are also pluralized with *-lang*.

This way of pluralizing, however, is more properly located within the noun class system. "Verbs" with the *-lang* suffix are not inflected for tense and aspect and occur in only one verbal environment, after the progressive markers *co* and *wa*.

(103) No inflections for -lang plurals

> *bumba + a*   'failing'
> *bumba + lang*   'failing repeatedly'

```
 L   L   L                          L    L    L    L
 o bamba                            o co bambaa
'She fails.' (Hab)                 'She is failing.' (Prog)
   L   L   L   L                      L    L    L    L
* o bambalang                       o co bambalang
```
* She fails repeatedly.'   'She is failing repeatedly.'

Nonetheless, the fact that a third way of pluralizing verbs exists is significant with regard to the question of renewal of part of the system of verbal extensions (Childs 1987).

Interpreting the semantics of the Plural is relatively straightforward. The Plural can signify that the action was repeated many times either at one instant or over a period of time. It can mean that there was more than one agent, more than one patient, or even that there is more than one benefactee, depending on the semantics of the verb (and its other extensions). In other words, plurality in the verb can involve any argument (see Bybee 1985:103f).

(104) Semantics of the Plural

boli	'hurt'
booluu	'hurt in many places or many times, having many scratches or sores, infected with venereal disease'
kel	'cut'
kilikili	'cut into many pieces'
cica	'bounce because of holes, as a vehicle on a road, stumble as a person does in the dark'
ciicia	'bounce repeatedly because of holes, as a car on the road, to stumble and trip'

When a verb with an inherent component of plurality, such
as the third example, is pluralized, the semantic
difference between the extended and non-extended forms may
not be very great.

Thus the concept of plural extends both to the verb
itself and to its arguments. In that plurality is a
feature common to both substantives and actions, the
sharing of marking is not surprising. Talmy gives the
shared concept the name "plexity", which he defines as
being,

> a quantity's state of articulation into
> equivalent elements ... [the term is] intended
> to capture the generalization from matter over
> to action.
>
> (Talmy 1979:4)

The Plural has the widest distribution of all the verb
extensions; it can be affixed to more verbs than any
other, and it can co-occur with other verb extensions more
than any other.

Verb pluralization has no immediate effect on the
syntax of the sentences in which it appears. It does not
affect the total number of arguments allowed; any argument
can consist of more than one member, but no argument is
added or subtracted when a verb is pluralized.

6.2.4.8 Summary

The typical Kisi verb can affix many combinations of
verb extensions. The meanings of the extensions are

fairly transparent, and the set of extensions a verb may affix is dependent on the semantics of the verb. In general we can see that there has been some attrition, i.e., both phonological erosion and semantic blurring, yet the system as a whole is still quite productive.

An interesting sidelight is that the pattern formed by affixing replicates that found with non-extended forms, a morphological "conspiracy" (Kisseberth 1970) seems to be at work. In that monosyllabic verbs in Kisi often receive syllabic extensions and polysyllabic verbs receive single segments not altering syllable structure, there is a tendency for Kisi verbs to be polysyllabic, most often disyllabic. This tendency was also borne out in our survey of verbs without extensions. It is similar to several processes in Pali ("Pali two-mora conspiracy") where "three-mora syllables were turned into permissible two-mora structures by means of three phonetically quite distinct processes" [Vowel shortening, Cluster simplification, Vowel epenthesis] (Hock 1986:160). In Kisi we have comparable phonological processes at work with respect to three different morphological processes, all designed to create or maintain most desired disyllabic verbs.

6.3 Non-finite verbal morphology

Similarly to verb extensions, infinitivizing suffixes also fall somewhere on the continuum running from inflectional to derivational morphology, closer to the derivational end than tense, aspect, and mood; closer also than verb extensions. It should be recalled that the "infinitive", as I have been using the term, refers to a non-finite form with a number of different uses. The forms are used as both adjectives and nouns. I give below examples of infinitives as nouns. In the first example, the infinitive appears in a prepositional phrase (after the preposition *le* 'for') and being modified by an adjective *bEndu-* 'large'. In the second as an object (but still with an ideophone).

(105) Infinitives as nouns

```
L   L   H   H   L H   H   L L   L   L H
o conggul la fala le kela bEndoo
he gossip me Fallah Prep wander large
'He gossiped (to me) about Fallah for traveling about
so much.'
H    H H   H   L  L H   F  H L   H
manggaa nO biyOO dalii ni
glue   have stick-Inf Idph Foc
'The glue is quite sticky.'
```

Infinitivizing suffixes can properly belong to inflectional morphology because all verbs appear in this form (productivity / generality), and the meaning change is not that great between forms with and without the suffix. What the infinitivizing suffix actually does is to nominalize or de-verbalize a verb (by removing TAM

distinctions). In some cases the word changes its part of speech (and thus more properly should belong to derivational morphology), but since at least one function of such verb forms is within the TAM system, I have chosen to treat the infinitive here.

On the surface Kisi verbs have one of three infinitive suffixes: *-O(O)*, *-o(o)*, or *-a(a)*, with the following qualification. A small set of verbs end in suffixes that are homophonous with the suffixes in the noun class system. I give some examples below.

(106)   Verbs ending in noun class suffixes other than *-o*

Stem	Infinitive	Noun class	Gloss
bandu	*bandei*	<u>i</u>	'be tall'
lol	*luang*	<u>ma</u>	'sleep'
tuili	*tuiliang*	<u>ma</u>	'urinate'
pisul	*pisultang*	<u>la</u>	'play'
binggi	*binggileng*	<u>le</u>	'be short'

These verbs constitute less than 3% of the total (Base form) verbs in one count (N = 750) and will not be discussed further here.

Of the most common infinitive suffixes, there is no problem in deriving the forms with *-a(a)*. Any stem that ends in a *-a* has *-a(a)* as a suffix.

(107) Verb stems ending in *-a*

Stem	Infinitive	
baa	*baa*	'tie or hang'
mOOsa	*mOOsaa*	'fold'
saala	*saalaa*	'catch something thrown'

mena	menaa	'take an oath, swear'
mOsOnga	mOsOngaa	'mix, combine'
mOsOngia	mOsOngia	'mix, combine (pl)'

This same generalization holds true with extended forms. The one extended form that can end in -a, an a-final base form (the last example), has an a-final infinitive. The situation here directly replicates that found in the noun class system when -o is suffixed to a-final stems. Nouns taking the o class suffix -o always end in -a when the stem ends in -a (see Chapter 5).

(108) o class nouns with a-final stems

```
LL L    H      LL LH
saasa + o -> saasaa        'barricade, fence'
HL L    H      HL LH
saala + o -> saalaa        'blessing, sacrifice'
```

In that infinitive forms take other noun class endings and become more like nouns when they take this suffix, it seems likely that the morphophonemics are also parallel. It seems possible, then, that we can interpret all a-final infinitives as being infinitivized by the -o suffix. This interpretation seems further correct in that extended forms with a stem-final a also have a-final infinitive suffixes, and, as will be seen below, all extended forms have o-final suffixes.

The one major distinction among infinitives is between those with -O(O) as a suffix and those with all extensions. Only Base forms, verbs without extensions, can have -OO as a suffix. The other verb ending is -o and

it is found with both Base forms and verbs with
extensions. The suffix *-O(O)* has no parallel in the noun
class system.

A further fact about *-O(O)* is that nearly all verbs
with a stem-final *u* have *-O(O)* as a suffix. Larry Johnson
(p.c.) also finds that verb stems ending in *-u* always have
an *-O(O)* infinitive.

(109)   Disyllabic stems ending in *u* with *-OO*
          infinitive

Stem	Infinitive	
salu	*salOO*	'scrape, sculpt, plane'
biondu	*biondOO*	'miss, upset (a trap)'
kundu	*kundOO*	'strike, hit'

But it is not necessarily the case that all disyllabic
stems ending in *u* will have an *-O(O)* suffix.

(110)   Disyllabic stems ending in *u* with *-oo*
          infinitive

mEElu	*mEEloo*	'reach an end or boundary'
cOOlu	*cOOloo*	'repeat, add more or add on to'
hunggu	*hunggoo*	'pound rice (in a mortar)'

Furthermore, there are the following homophonous forms
with different infinitive endings.

(111)   Homophonous Base forms with different
          infinitives

conggu	*conggOO*	'safekeep livestock'
conggu	*conggoo*	'gossip'
cuu	*cuuwOO*	'finish'
cuu	*cuuwo*	'bring'
lau	*lauwOO*	'braid, plait'
lau	*lauwo*	'struggle'

On the basis of these forms a rule of vowel blending is needed, one which will change the stem-final vowel appropriately.

(112) Vowel blending

$$CVCu + \begin{bmatrix} o \\ o \end{bmatrix} \rightarrow \begin{bmatrix} oo \\ oo \end{bmatrix} \quad \text{where CVCu is a verb}$$

Disyllabic stems ending in *i* always have *o* as a suffix.

(113) Disyllabic Base forms ending in *i*

bindi	*bindio*	'shoot'
huli	*hulio*	'be dirty'
dembi	*dembio*	'taste'
kafEi	*kafEiyo*	'excuse'

Our discussion thus far exhausts the possibilities for disyllabic and trisyllabic Base forms, as well as verbs with extensions. As discussed in Chapter 4 above, disyllabic verbs, when open, only have *i, u,* or *a* as final vowels. All extended forms have *o* as infinitive markers. It only remains to make a few comments about monosyllabic verbs.

We have seen already that monosyllabic Base forms ending in *a* always have *a*-final infinitives. Any other vowel may close a monosyllabic verb, and it is generally true that all of these monosyllabic verbs have an infinitive ending in *-O(O)*.

(114) Monosyllabic Base forms with *-O(O)* suffixes

bii	*biyOO*	'hold'
ce	*cOO*	'see'
hEE	*hiOO*	'singe'

cO	cOO	'bury'
kou	kowOO	'harvest rice'
buu	buwOO	'peel'

The one exception to this generalization is verbs ending in *-o*. In the infinitive form, monosyllabic verbs end in *-oo*.

(115) Monosyllabic verbs ending in *-o* with *-o(o)* infinitives

| lo | loo | 'to remain, be left, stay, continue' |
| wo | woo | 'be afraid' |

The only other monosyllabic verbs ending in *-o* are *so* 'say' and *yo* 'dance'; both of these have other noun class endings as infinitve suffixes: *suEi* with an i class suffix and *yolang* with a la class suffix.

An early survey revealed the following distribution of verbs into noun classes.

(116) Noun class membership of verbs

-O(O)-final verbs

| *-O(O)* | 242 |

o class

| *-o(o)* | 192 |
| *-a(a)* | 290 |

i class	6
la class	6
le class	3
ma class	2

| | ——— |
| Total verbs | 741 |

These quantitative facts show that the two predominant ways of forming infinitives is by suffixing either *-O(O)*

or -o. Using noun class endings from non-o-classes is relatively unimportant to the system as a whole.

6.4 Other verbal processes

Other morphological processes that verbs undergo are discussed in Chapter 7: Derivational morphology. Among these are included processes which change verbs into adjectives and those which relate verbs to nouns. The fact that many verbs in their infinitive form may be interpreted as possessing noun class suffixes will be discussed in greater detail there.

Chapter 7: Derivational morphology

As was said earlier, the difference between
inflectional and derivational morphology is scalar rather
than discrete, yet it is a division often made for
heuristic purposes, as has been done here. Derivational
processes in Kisi contrast with inflectional ones in a
number of ways. They are generally processes which do
not have as wide a distribution and they are not
obligatory in the same way as is an aspectual distinction
or a noun class marker. Derivational morphemes may also
change the word class of the original word, while
inflectional morphemes do not. Very often there are
significant meaning changes involved with derivational
morphemes. It is this set of criteria that has guided the
decisions separating derivation from inflection.

7.1 Affixes which do not change the word class of the stem

I first discuss affixes which do not affect the word
class of the stem to which they are affixed.

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7.1.1 The retinue suffix

One productive suffix in this category is the retinue affix **-waa** denoting 'others related to or accompanying the person to whom the affix is attached'[1]. It can be affixed to any common or proper noun denoting a person.

(1) Some plural nouns ending in **-waa**

```
L LH
masaa          'the chief'
L LH  HL
masaa-ṿaa      'the chief and his retinue'
L L  HL H  FL   HH   HHH   HH  H
fala vaani-waa baangiaa naa ni
Nam  Nam   Ret redeem-Pl us Foc
'Fala Varney and others redeemed us.'
L L   H HH   H  LL HL  L   L
o sanggalial la saa-waa fangga
she praise-Ben-Pl me Nam-Ret plentifully
'Over and over she praised Saa and others for me.'
```

Although it bears some similarity to the **a** class (animate plural) suffix **-a H** (sometimes realized as [**wa H**], both its length (two vowels) and tones militate against any exact identification.

7.1.2 The associative marker

There is an associative morpheme **ma** which is used in forming compound-like constructions involving proper nouns.

---

[1] John Singler (p.c.) has pointed out to me that this suffix is similar to the third person plural pronoun **a L** (identical to the Kisi pronoun) found in several other West African languages. It has parallels in Klao, Vai, Bambara, and Yoruba, and may represent an areal phenomena. It also has a reflex in Liberian English **dEm**, which can similarly be attached to nouns with the same meaning.

(2) Associative marker *ma*

```
L      L  L  L L  H
lEng-nde-ma-kisi-leng                'the Kisi area'
land-NCP-Ass-Nam-NCM
R   H  L   L  L   H
bEl-ta-ma-kpandi-lang                'Bandi pineapple'
pineapple-NCP-Ass-Bandi-NCM
L  L H HH  LL  H H  L  HHH  H
a celulEi maa bulu-ma-kuEEndu
you fat   like horn-Ass-Nam
'You are fat like Koindu-bread (shaped like a horn).'
```

The morphosyntax of these constructions parallels that of other compounds with the addition of the associative marker between the head and dependent element. Also like adjectives, at least in the first two examples, the noun class marker (NCM), which is usually suffixed to the stem, is replaced by the noun's pronoun, and the suffix is affixed finally.

7.1.3 The distributive

This construction is used to convey a meaning of 'every, all'; with singular nouns it clearly has a sense of 'each and every' as in a series or succession. The construction follows the pattern given below.

(3) The distributive construction

```
            H
NCP + Stem + o + NCP + Stem

L    H     L    H
mEngndang  mEngndeng              'water (collective/sg)'
L  L   H  L  L
ma-mEng-o-ma-mEng                 'all the water'
```

```
L  L   H  L  L
le-mEng-o-le-mEng        `every drop of water'
R  H   R  H
hElle   hEllong          `salt (collective/sg)'
L  R  H  L  R
i-hEl-o-i-hEl            `all the salt'
L  R  H  L  R
ng-hEl-o-ng-hEl          `every grain of salt'
```

As in many other noun constructions the o̲ class is
exceptional; neither stem prefixes its pronoun in the
distributive construction.

(4) The o̲ class distributive

```
              H
Stem + o + Stem
```

```
L H   L H  H
sOO   sOOwa             `chicken (sg/pl)'
L H  H  L H
sOO-o-sOO               `every chicken'
L  H  L  H
tallo   taltang         `bridge (sg/pl)'
L  H  L
tal-o-tal               `every bridge'
R  H  R  H
tOmndo   tOmnda         `monkey (sg/pl)'
L  H  L
tOm-o-tOm               `every monkey'
```

Certain time words prefix i rather than their own
pronouns. In both examples below, one would expect either
the le̲ class pronoun or the i̲ class pronoun to be prefixed
in both cases. What we see is one prefix i.

(5) Time word distributives prefixing i

```
L          H
i + Stem + o + Stem
```

```
L H  H     L  H H
paaleng  palEi         `day, sun, afternoon'
L  L  H  H  L  H
i-pala-o-pala          `every day'
```

```
LH  L        L  HL
diileng / idii                  'morning'
L   LH  H  LH
i-dii-o-dii                     'every morning'
```

But not all time words follow this pattern.

(6) Time word distributives not prefixing *i*

```
L  LH       L  LHH     L  LH
wOsio / wOsiei   wOsiong         'year (sg/sg/pl)'
L  L  H   L  L
wOsi-o-wOsi                      'every year'
L    HH    L   H
panggei   panggong               'month, moon (sg/pl)'
L    H  H   L    H
pangge-o-pangge                  'every month'
```

There is some variation with regard to this construction. For example, one speaker used the *i* prefixed form for 'every month' in a story he was telling (and which I recorded). Also, one of the *i* prefixed forms in the previous set of examples was recorded in the expected pattern without the *i* prefix.

This i-initial pattern is undoubtedly related to the fact that several time words (and locatives) begin with *i*; others not already given are *icOl* 'night', *inEE* 'somewhere, anywhere', and *ikEi* 'nearby'. These words may be a residue of prefixed forms which were once more common, as was the case in the nominal part of the language (Childs 1983a). Many of the less productive affixes may indeed be interpreted as what Bolinger calls "meaningless residue" (1950:133), as in his example *cran* in *cranberry*.

7.1.4 The agentive suffix

The suffix *-nOO* is something of an agentive suffix

and denotes the person carrying on the activity of the

stem to which the suffix is afixed.

(7) Constructions with *-nOO*

LL LH
wiinOO   'thief'
LL H
Cf. *wiileng*   'to steal, thievery'
LL LL LH
doosuunOO   'hunter'
LL LL H
Cf. *doosuuleng*   'hunting'
LL L LH
puulu-nOO   'Western-acting person'
LL LLH
Cf. *puuluei*   'Western ways or culture'

All of these nouns have regular a class plurals. An affix

performing a similar function is the prefix *wana-*.

7.1.5 The agentive prefix

The morpheme *wana-* is related to the word for

'someone' given below[2] and can occasionally be used as an

indefinite pronoun.

(8) Other functions of *wana-*

L   H   L H   L   H
wangndo / *wando* *wangnda*   'someone, a person'
L   LL H L   H H L   L H   H
nyE wana mandangndo co conggulang ni
thing one be-careful Cop gossiping Foc
'What one has to be careful of is gossips.'

---

[2]   There are also a few comparable compounds with
wang- as the element representing 'person'.

```
L  L    H  L  LL   L  L  H    L  L  LH  H    L   L L  LL   H
```
te bungnde i bii wana pE, kpisingia tung ng kpisingia ni
Conj cold it grab one Conj, sneeze just you sneeze Foc
'When a cold grabs you, sneezing is all you can do.'

Important for this discussion, however, is its use as an
agentive prefix.

(9) The agentive *wana-*

```
LL    H  LH
```
wana-yondaa   'town crier'
```
       L  LH
```
Cf. *yondaa*   'to announce'
```
L  H   LL  L  LH
```
wana-sOOlEmaa   'boor, a rude person'
```
       LL  L  LH
```
Cf. *sOOlEmaa*   'trouble'

Nouns with the *wana-* prefix belong to the <u>o</u>/<u>a</u> classes.

It could be argued that *wana-* should more properly be
included in the discussion of compounds. I include it
here because of its functional similarity to *-nOO*, the
agentive suffix. Nonetheless, its parallelism with
compound formations should not go unnoted.

7.1.6 <u>Other derivational affixes</u>

The suffix below is affixed to cardinal numbers and
the word *tase-* to form ordinal adjectives. In isolated
form words with this suffix stand for 'the Nth time'.

(10) Ordinal suffix

```
   LH
```
-ndOO
```
LH        LH           HH      HH       LH
```
diing-ndOO   *lEEng diing-ndOO*
two-Card   cutlass two-Card
'second'   'second machete'

```
L H    L H            H H     H H    L H
yaa-ndOO             lEEng yaa-ndOO
three-Card           machete three-Card
'third'              'third machete'
L  H   H   L H
tase-la-ndOO
first-NCP-Card
'first one, beginning'
```

This suffix can be affixed to any number.

An affix of limited productivity is a diminutive suffix.

(11) Diminutive suffix

```
L   L
pOmbO-      'small, a little'
L   H H H  H H
pOmbuiinaa       'very small'
L L   H   L
saa pOmbO       'small Saa, Saa the younger'
L L   H   L H  H
saa pOmbuini    'very small Saa, Saa the youngest'
```

7.2 Nominalization

In an earlier chapter (Chapter 6: Inflectional morphology, verbs), I discussed the infinitive form of verbs; the infinitive consists of the stem and an infinitivizing suffix, much similar and in some cases identical to the noun class markers suffixed to nouns. It was pointed out there that although the association was close, it could never be considered exact, so we cannot say that verbs take noun class markers as infinitive markers. This lack of complete correspondence is because the -OO infinitivizing suffix has no parallels in the noun class system. This is the suffix that is attached only to

verb stems in their base form (without any verb extensions). Extended verbs always take the *-o* suffix.

A second nominalizing affix that I discussed in that chapter is the *la* class suffix *-lang*; it was discussed within the context of verb extensions. Although *-lang* pluralizes verbs, the suffix can not be properly considered a verb extension because it does not partake of the inflections of tense, aspect, and modality, as do the other verb extensions. This noun class suffix, along with several others, have functions I have detailed in Chapter 5: Inflectional morphology, nouns. I summarize these functions below; because of considerable allomorphy I give the names of the classes rather than the suffixes.

(12) Noun class suffixes

la class suffix: nominal pluralizer of all verbs

i class suffix: 1) denotes language names
                      2) some abstracts

le class suffix: 1) diminutive suffix
                      2) used with abstracts

Below are two examples of verbs with the infinitive suffix *-OO* used as nouns within the circumposition *o...ning*. The third example shows the infinitive modified by the adjective *bendu-* 'big, large'.

(13) Infinitives used as nouns

```
L  L H    H H  LLL LH   R
o busul la o hiouwOO ning
he bark me Prep pass-Inf Post
'He barked at me while passing.'
L  L H    H H  LL LH   R
o lelil la o hOuwOO ning
```

```
        he sweat me Prep prick-Inf Post
        'He sweated for me [I saw] when taking an injection.'
        L  L  H  H  L H  H  L L  L  L H
        o conggul la fala le kela bEndoo
        he gossip-Ben me Fala for wander big
        'He gossiped about Fallah for extensive wandering.'
```

Both noun class suffixes and the infinitive suffix *-oo*

register the presence of a noun.

7.3 Verbalization

There is no explicit verbalization process, but there

is the hint of a derivational relationship between many

nouns and verbs with the causative extension. (I give

both noun and verb stems.)

(14) Causative verbs and nouns

bulu	'hole'
buli	'drill'
dembu	'stomach'
dembi	'taste'
kei	'gate'
kei	'pass by or through'

Another route by which verbs could enter the language

would be through verb-like words that appear in a verbal

constructions. Such words are the *lang*-final forms, such

as those discussed in 7.2 Nominalization, and the

construction in which they commonly appear is after *co* and

wa, the copula and progressive marker. The first example

illustrates this construction. In no other environment

does *biyOOlang* function similarly to a verb. The second

example illustrates another environment in which *-lang*

forms can appear. Again *baltang* is no verb.

(15) Verb-like words in verb-like constructions

```
L  LL   L  LH   L   L  LL  H        HH   HB
```
wanaa-biyaa co biyOOlang kpeekpei
people-catch are catch-Pl a-lot
`The catching people (body snatchers) are catching a lot.'
```
H   HH   H  L   H
```
i mEi nda baltang
I leave them talk-pl
`I left them carrying on a conversation.'

BiyOOlang is related to a verb (*biyOO*) but *baltang* (cf.

balio `conversation, discussion') is not. One can see

here the possible route nouns could follow in being

reinterpreted as verbs on the basis of their appearing in

verb environments. Ideophone-like words can also appear

in this environment (see 4.8.2.2 Morphological criteria

[of ideophones]) and may be deyloping a similar

relationship with verbs (cf. Doke 1931:224).

7.4 Adjectivalization

There is a productive process that changes verbs into

adjectives. Adjectives are formed from both the Base and

the Middle (extended) forms. Verbs with stative meaning

are more likely to have adjectives formed from the Base

and verbs with active meaning are more likely to have

adjectives formed from the Middle[3]. There are examples

---

[3]   In the discussion below, I do not discuss forms
with the Plural extension. Nonetheless, all
generalizations expressed about the Base and Middle forms
apply also to these extended forms with the Plural extension.

where a verb has both a Base Adjective and a Middle

Adjective. I repeat below an example given earlier.

(16) A verb with both Base and Middle Adjectives

	L L	
Base:	*yau*	'to cook'
	LL L	
Base Adj:	*yauwa-*	'cooking, used for cooking'
	LL R	
Mid Adj:	*yauwang-*	'cooking itself, cookable, cooked'

The process of relating the Base to the Base Adjective is

illustrated below. While it is generally true that *-Ei HH*

is the mark of the verbal adjective, it is not always the

case as shown by the last two examples.

(17) Adjectives and related verbs

Verb	Adjective	Gloss
LL L *waala*	LL HH *waalEi-*	'sour'
L L *celul*	L H HH *celulEi-*	'fat'
L L *tambu*	L HH *tambEi-*	'rotten, spoiled'
L L *huli*	L LHH *huliEi-*	'dirty, dusty'
L L *binggi*	L L *binggi-*	'short'
LL *bii*	L L *biya-*	'take, seize'

With stative verbs the semantics are no different than the

verb form. With active verbs the most common use is with

wana- 'person', the agentive prefix discussed above.

(18) Adjectives from active verbs

L L H   H H L H   L LL L LH L LH   H
o soli ndu halikpeng wanaa-biyaa a bii ndu
she take-out him just-so people-sieze-Adj they catch him
'She took him out just so the chasers can catch him.'

```
H  H   H   H  HL   L  L   HHL   H    H  H   H   L    L
```
ya i co macua wana-suaa le, kE i wa minggi
me I Cop at-all person-talk-Adj Neg, but I Aux return
`I'm not a talkative person, but I would retaliate.'

The process of relating the Middle Adjective to the Middle

is straightforward; replace the vowel of the Middle

Extension (*u*) stem with *a*. If the extension has *a* as its

vowel, there is no difference between the Middle Adjective

and the Middle. If the vowel has been replaced by *i*, the

only other stem vowel appearing here, simply insert the *a*

after the stem vowel. The Rise is now realized as a

sequence of LH.

(19) Examples of adjectivalization of the Middle

Gloss	Verb	Middle	Mid Adj
	LL	LL R	LL R
`take'	*cua*	*cuanung*	*cuanang*
	L	L R	L R
`fall'	*del*	*delnung*	*delnang*
	LL LL	LL R	LL R
`reach'	*fuuluu*	*fuulung*	*fuulang*
	L L	L R	L LH
`pick'	*hEli*	*hEling*	*hEliang*
	L H	L R	L LH
'lie down'	*hini*	*hining*	*hiniang*

The meaning of the Middle Adjective has, besides the

expected meaning associated with the Middle, a stative or

potentive meaning, `capable of being ___, able to ___'.

(20) The semantics of the Middle Adjective

```
LL    L  H    L R    H  L  L   R     H  HL
```
fEEnggE-num-pulang-ndo ma vEngung ndu tuu?
pan-your-bathing-Mid-Adj-NCM you hide it genitals
`Why are you hiding your genitals from your bath tub?'
```
H LH  L   H L  L  R   H  L  H    H  H H H
```
sEvEi co ndu i-landang o ba kpengndo kpokolo
cowrie is her NCM-hang-Mid-Adj Prep hand wrist Idph
`The cowrie shell is hanging on her wrist.'

```
L  LL R    H  H  F     H
o-huulang o co ning ni
NCM-able-to-jump he is now Foc
```
'He's ready to jump now.'

In summary, then, the process of forming adjectives from verbs is an extensive and regular one, supplementing the small group of adjectives which can not be derived from verbs.

7.5 Adverbalization

The process here involves using a sequence of *nyE* 'thing' followed by an adjective adverbially.

(21) Noun-Adj phrases as adverbs

```
   L  L  L
nyE-binggi          'shortly, soon'
    L  L
Cf. binggi-         'short'
  L  L HH
nyE-lolEi           'bitterly'
   L  HH
Cf. lolEi-          'bitter'
  L  L  HL
nyE-kEndEi          'well, thoroughly'
    L  L
Cf. kEndE           'good'
L  L  L H   H  LL HL H   L  L  L  H   L H  H   L H
o fulil la caakiiyo nyE-kEndE nEnggElE-nEnggElE
he beat me casava-leaf thing-good Idph
```
'He beat the cassava leaf for me very nicely.'

This is not a widespread process.

7.5.1 Locatives from nouns

Nouns which designate a place are changed into locatives by removing the noun class marker. In the

examples below I give first the noun, then the locative.

(22) Noun stems as locatives

L H	
coo	'sky, weather; art of climbing trees'
L H	
coo	'up, up high'
H H H H	
coo-coo	'far up; loudly'
L L H	
lecoo	'over, on top of, about, concerning'
H	
Cf. *le*	'for'

L H	
lEngndeng	'land, country, ground'
L	
lEng	'on the ground or floor, down'

L L H	
luangnde	'mountain, large rock, holy place'
L L	
luang	'upper or higher part, e.g., of a town'

See also other examples given in Section 4.6 Adverbs.

7.6   Compounds

The basic (and citation) pattern for the formation of noun-noun compounds is that given below.

(23) Compounds

Stem$_1$-NCP$_1$ NCP$_2$-Stem$_2$-NCM$_1$

L L H H L L H		
kela-ei *kela-ng*		'ring/s'
Stem-NCM Stem-NCM		
L H L H		
ni-leng *ni-lang*		'ear/s'
Stem-NCM Stem-NCM		
L L H L L LH	L L H L L H	
kela-i la-ni-ei	*kela-ng la-ni-ng*	
ring-NCP NCP-ear-NCM	ring-NCP NCP-ear-NCM	
'earring'	'ear(s)rings'	

The morphosyntax of the structure indicates that the first

noun is the dominant one. The simple order reflects that of noun-adjective combinations where the order is Noun-NCP Adj-NCM where the noun dominates the adjective. Here the second noun suffixes the NCM of the first noun.

Nouns belonging to the o̲ class are exceptional in appearing without their noun class pronouns.

(24) Compounds involving o̲ class nouns

$$\text{Stem}_1 \quad \text{NCP}_2 + \text{Stem}_2 + \text{NCM}_1$$
(o̲ class)

```
L L H       L L  H
bOlO-o      bOlO-lang  'bag (sg/pl)'
Stem-NCM    Stem-NCM
L H
malu-ng                'rice (pl)'
Stem-NCM
L L  L  L L H      L L  L  L  L L H
bOlO ng-malu-o     bOlO-la ng-malu-lang  'rice bag (sg/pl)'
bag NCP-rice-NCM   bag-NCP NCP-rice-NCM
```

In the first example we see no pronoun after *bOlO* when it is singular (belongs to the o̲ class), while in the second it is present (*la*) when the meaning is rice bag*s̲*.

Compounds involving three stems are also possible.

(25) Three-element compounds

```
L LH     L R
pelei    pelong     'foot, leg'
LL H     LL H
nEiyo    nEilang    'road, path, way'
H H      H H
soo      sua        'horse'
L LL LL HH
peliinEisoo  'bicycle tire (foot of the road horse)'⁴
```

---

[4]   Compare this compound with the word for 'bicycle'.

```
LL HH
nEisoo          'bicycle, road-horse'
```

Compounds can also be formed from other combinations (other than sequences of nouns). Common patterns are a noun followed by a verb and a verb followed by a non-subject argument, both patterns recapitulating the order of elements at the clause level.

(26) Compounds involving verbs

H HH H H H		
dEnOO dEnElang	'an incident or occurrence' (sg/pl)	
L LH		
palaa	'to bother or irritate'	
H H H L H		
dEnE-pala-o	'a bad incident, disaster'	
Noun-Verb-NCM		

L H	
mEngndang	'water'
L LH	
tEmbio	'to wean'
H H H H H H H H H H	
tEmbi-ma-mEng-ndo *tEmbi-ma-mEng-nda*	'dragonfly'[5]
Verb-NCP-Noun-NCM	(sg/pl)

Some compounds, however, represent fairly well established forms and are not so semantically (and formally) transparent as the forms given earlier (see previous example 'dragonfly' as well).

(27) Established compounds

HH H L H	
soongtEndOO	'spider'
LLH LH	
suei soong	'finger (sg/pl)'
L LH	
tEndaa	'to split, to stretch or extend'

---

[5]   Speakers say that the dragonfly gets its name because it constantly dips its tail in the water.

```
L    H    H    H
tandangpollo                'butterfly'
L    LH    L    L    H
tandaa   tandalang        `area, portion'
H    H    H    H
pollo   poltang           `desert'

H  HH    H  H  H
buloo   bululang          `horn'
L L H
dioo                      `rice flour'
H  H  HHH
buludioo                  `bread'⁶
```

Neither of the first two compounds follows the exact morphosyntax of the compounding pattern stated above, primarily because of the shift in noun or word class. Animals must be placed in the o̲ and a̲ classes, which is registered by an o̲-final form in the singular and an a̲-final form in the plural. (For further discussion of unusual processes at work in naming animals, see 4.1.3 Names.) In all cases, the tones have been changed, and the stem for `spider' is *soongtEndE*, not that expected on the basis of `finger' and `stretch' (*so* + *tEnda*).

To conclude this section, I give examples of words which are found in many compounds. Some of them approach the status of affixes (see *wana-* above in 7.1.5 The agentive prefix). A large number of compounds are formed on the basis of the word for `thing' given below.

---

⁶   Bread is considered to be shaped like a horn.

(28) Compounds with *nyE-* 'thing'

<pre>
L H   L H
</pre>
nyOO   nyOOng   'thing, something'
<pre>
L H H   L   H H
</pre>
nyE-tOO   nyEm-tOOng   'something valuable'
<pre>
H H
</pre>
Cf. *tOO*   'news, fame, report'
<pre>
L L L H   L   L R
</pre>
nyE-sOlaa   nyEm-sOlang   'money'
<pre>
L L H
</pre>
Cf. *sOlaa*   'to get'
<pre>
L L L H   L   L R
</pre>
nyE-simaa   nyEm-simang   'pneumonia'[7]
<pre>
L   H
</pre>
Cf. *simndang*   'to stand'

See also above, Section 7.5 Adverbalization, for examples

of the way *nyE-* is used to form adverbs.

The words for 'male' and 'female' are used

productively with words denoting animals for animals of

respective sexes.

(29) 'Male' and 'female' compounds

<pre>
LL LH   LL LH
</pre>
piandoo   piandua   'male'
<pre>
LL LL   L H
</pre>
nau-piando-o   'bull'
bovine-male-NCM
<pre>
L   LL   L H
</pre>
tung-piando-o   'male dog'
<pre>
LL LH   LL LH
</pre>
laandoo   laandua   'female'
<pre>
LL LL   L H
</pre>
nau-laando-o   'cow'
bovine-female-NCM
<pre>
L   LL   L H
</pre>
tung-laando-o   'bitch'

As can be seen, the pattern replicates that of noun-noun

compounds, and is similar to noun-adjective combinations.

---

7   The reason the word for 'pneumonia' being called
'the standing thing' is that the Kisi people believe that
the disease comes from something that stands.

APPENDICES

<u>Appendix A</u>:   Different classifications of Kisi and its genetic
                      relatives.

The classification given in Chapter 1 is based on Greenberg 1966,
Dalby 1966, and Sapir 1971, as presented in Wilson To appear.
These schemes will not be repeated here. The first scheme
presented below is from Ruhlen 1987. The numbers after the
language groups indicate the number of languages belonging to
each group. In all classifications repeated below the details
are fleshed out more fully for languages closely related to Kisi.

Niger-Kordofanian [1,064 lgs, 181,000,000 speakers]

I. Kordofanian [32]
  A. Kadugli [9]
  B. Kordofanian Proper [23]

II. Niger-Congo [1,032]
  A. Mande [29]
  B. Niger-Congo Proper [1,003]
    1. West Atlantic [46]
        Bijago
        a. Northern [29]
            i. Senegal [3]: Fula, Serer, Wolof
            ii. Cangin [5]: Falor, Lehar, Ndut, Non, Safan
            iii. Bak [10]:
                a) Balanta-Ganja [2]: Balant, Ganja
                b) Manjaku-Papel [3]: Mankan, Manjaku,
                Papel
                c) Diola [5]:
                    Bayot
                    i) Diola Proper [4]:
                    [2]: Karon, Kwatay
                    (a)Diola-Gusilay [2]: Diola,
                    Gusilay
            iv. Eastern Senegal-Guinea Bissau [8]: Badyara,
            Banyun, Basari, Bedik, Biafada, Kasanga, Kobiana,
            Konyagi
            v. Mbulungish-Nalu [3]: Baga Mboteni,
            Mbulungish, Nalu
        b. Southern [16]:
            [2]: Sua, Limba
            i. Mel [14]:
                [1]: Gola
                a) Temne [8]: Baga Binari, Baga Koga,

Baga Maduri, Baga Sitemu, Baga Sobane, Banta, Landuma, Temne

b) Bullom [5]: Bom, Northern Bullom, Southern Bullom, **KISI**, Krim

2. Central Niger-Congo [957].

The second scheme comes from Mukarovsky 1976-77 and is notable primarily for its numerical format. He excludes several of the more widespread northern Atlantic languages and emphasizes the closeness of Atlantic, his "Western Nigritic", to Bantu.

Group 10: Western Guinean
  11 Diola
    111   Diola Fogny
    112   Diola of Carabane
  12 Manjaku
    121   Manjaku of Costa da Churo
    122   Manjaku of Costa da Baixo
  13 Mankany
  14 Balanta
  15 Limba

Group 20: Mel languages
  21 Themne
    212   Baga languages
    213   Landoma
  22 Bulom (Sherbro
    222   Mmani
  23 Kisi
  24 Gola

Group 30: Gur languages
Group 40: Togo Remnant
Group 50: Eastern Kwa
Group 60: Western Kwa

Houis 1958, and the French tradition in general, base their classification scheme on geographic criteria. They call the group to which Kisi belongs "Senegalo-Guinéean", which includes the following languages: Baga, Nalu, Mmani, Landuma, Tyapi, Badiaranke, Konyagi, Basari, Kisi, and Serer.

Appendix B: Some dialect differences between the Northern (Guinea) and Southern (Liberia and Sierra Leone) dialects of Kisi.

	Northern	Southern	
Lexical:	*sŁwaa*	*poonyaa*	'write'
	kala	*nyia*	'love'

Phonological:	*botteng*	*bolleng*	'head'
	kimbu	*cimbu*	'steal'

Phon rule:	No rule	t -> nd / N + ___

Appendix C: Examples from a textbook using Kisi as the language of instruction.

Below are some examples from the Guinea government's Alphabétisation effort. The words below come from the "LEXIQUE MATHS-PHYSIQUE, LANGUE KISIEI (Math-physics dictionary in Kisi)". The first two columns represent the French and Kisi columns as they appear in the dictionary. The third column is my English gloss based primarily on the French and my imperfect knowledge of math and physics. Underneath the Kisi words are given direct translations of the Kisi words.

FRANCAIS	KISI	ENGLISH
abscisse	*tuu ihinio* base lying-down	*abscissa*
absolu	*kinEiyo*[1] exactly, o_class	*absolute*
cone	*siOlOO kikiilo* sculpt traditional-round-house	*cone*[2]
element	*nyOO* thing	*element*
exposant	*kuiyo* be plentiful, in abundance	*exponent, index*
nombre	*vEEkpEo* how many, o class	*number*
planete	*luei nuluei* star cold	*planet*

---

[1] I have transliterated the dictionary's Kisi into the form of the Kisi used throughout this work.

[2] The word used for a traditional cone-shaped thatched house is kikillo in Liberia.

Appendix D: Some examples of Kisi literacy materials developed
               by the Institute of Liberian Languages.

Yau Ikisio 1 (Kisi Primer 1). 1983. Fayia T. Mayson. Monrovia,
    Liberia: The Institute for Liberian Languages.

Yau Ikisio 2 (Kisi Primer 2). 1983. Fayia T. Mayson. Monrovia,
    Liberia: The Institute for Liberian Languages.

Yau Ikisio 3 (Kisi Primer 3), Test edition. 1982. Fayia T.
    Mayson. Monrovia, Liberia: The Institute for Liberian
    Languages.

Yau Youvaa Ma Kisiaa (Kisi Bird Book). 1984. Monrovia,Liberia:
    The Institute for Liberian Languages.

Yau NGbundOO Le Kisiaa (Kisi Story Book). 1984. Tamba Mayson.
    Monrovia, Liberia: The Institute for Liberian Languages.

Yoonggu KEndE MElEkaa Mee Maki Poonyiaa YE (The Gospel of Mark in
    Kisi). 1982. Monrovia, Liberia: The Institute for Liberian
    Languages.

Appendix E: Kisi speakers serving as informants.

Kabakorli, Fayia. At the time of my research (1983-84) one of the
two Kisi radio broadcasters for an evangelical station,
Everlasting Life/Love for West Africa (ELWA), Monrovia, Liberia.
He does the Kisi broadcasts for speakers of the Southern dialect
of Kisi. Born and raised in the Foya area in Liberia near the
border with Sierra Leone and Guinea. High school education.

Keifa, Maurice. Born in Sierra Leone, immigrated to the United
states in 1975, now working for an American bank. First daughter
and first wife Kisi. Second wife and second daughter Mende.
Also speaks French, Mende and Krio. Former principal of a
mission school in Kailahun, Sierra Leone.

Lambert, Fallah. A well-educated and articulate native of Guinea
unable to find work either in Guinea or Liberia. Received the
second part of his baccalaureate degree (bac deuxiemme partie).
Attended Patrice Lamumba University outside Moscow. Speaks
French, Russian, Mende, Krio, Kono, and some Liberian English.

Mayson, Tamba Fayia. Trainer and Supervisor for Kisi Literacy
Project. Literate in both Kisi and English. Also speaks Mende.
Pursuing an advanced accounting degree in Monrovia, Liberia.
Presently (1988) working for a health organization (CHAL) in
Liberia and for The Institute for Liberian Languages (TILL), a
Lutheran mission in Liberia.

Ndorbor, Moses D. A schoolboy forced to leave school for lack of support (eighth grade). His father is Bandi, and his mother is Kisi. Speaks only a little Bandi, although he was initiated into Bandi society.

Tamba, Fallah. Born in Sierra Leone of Guinea Kisi parents. Immigrated to the United States in 1975. At the time of our consultation (1981), he was working as a night watchman.

Tamba, John. Serving as the Guinea Kisi radio broadcaster for ELWA. Born in Guinea near Guekedou and speaks both Southern and Northern dialects of Kisi. Also speaks Liberian English.

Tengbeh, Paul Fayia B. A schoolboy forced to leave school because of lack of support. Born in Sierra Leone, educated mostly in Liberia through twelfth grade. Speaks English, Liberian English, Krio, and Mende.

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    UCB.

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