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NORTHWESTERN UNIVERSITY

WORODUGUKAN: A COMPARATIVE AND DESCRIPTIVE STUDY

A DISSERTATION

SUBMITTED TO THE GRADUATE SCHOOL

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

for the degree

DOCTOR OF PHILOSOPHY

Field of Linguistics

By

Peter Judson Gingiss

Evanston, Illinois

June, 1973

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TABLE OF CONTENTS

I. INTRODUCTION

Worodugukan is a Manding dialect spoken in Seguela, a town of about 11,000 persons in northern Ivory Coast. Translated literally, it means "kola-country-language".[1] This study will describe Worodugukan and will relate it to other Manding dialects.

Before discussing what is of interest to the linguist in Worodugukan, it would be well to discuss the Mande language family as a whole. Then Worodugukan can be placed in perspective. The Mande language family is a group of languages which are found throughout West Africa. Mande languages are spoken in Senegal, Gambia, Guinea, Mali, Liberia, the Ivory Coast, Sierra Leone, Ghana, Upper Volta, and Mauritania. The Mande languages are placed by Greenberg (1966) within the Niger-Congo language group; William Welmers (1958) has suggested that the Mande languages appear to be less closely related to other languages in the group than the other languages are to one another.

A. The Position of Worodugukan within the Manding Complex

Welmers (1958) has subdivided the Mande family into two major groups, the Northern-Western Division and the Southern-

---

1.
     Worodugukan is the name by which the people of Seguela refer to the language variety spoken there. For other varieties, scholarly usage has established names which will be used in this manuscript rather than indigenous names. The terms, "Eastern Dyula" and "Commercial Dyula", although not commonly used, differentiate two similar but discrete varieties both of which are commonly called simply "Dyula".

Eastern Division. The latter division contains varieties of comparatively minor scope, and material on these varieties is rather sparse. Languages within the Northern-Western Division are better known and have been more thoroughly studied.

The Northern-Western Division is divided into two sub-divisions, Southwestern and Northern. In the Southwestern sub-division are languages found primarily in Sierra Leone and Liberia: Mende, Loko, Loma, Bandi, and Kpelle. In the Nor-thern subdivision are Susu-Yalunka, Soninke, Hwela-Numu-Ligbi, Vai, Kono, Khassonke, and the dialect complex of which Woro-dugukan is a member. Welmers terms this dialect complex Bam-bara-Maninka-Dyula. Others, such as Bird, have used the term Mande-kan. In this study the complex will be called the Man-ding dialect complex.

Although it is impossible to trace the pre-history of the Mande peoples (Welmers suggests that the Mande language family split off from the Niger-Congo group about 3600 years ago according to glottochronology), the Manding dialects can be assumed to have derived from varieties dating back to the great Mali empire. Innumerable migrations south and east have spread Manding dialects far beyond the boundaries of the original empire, the seat of which was in present day Mali.

The number of dialects or varieties within the Manding complex is impossible to ennumerate. There are many, and it is difficult to determine which are different enough from others to deserve special status. Not all Manding varieties

have yet been described. The varieties which are best known
are Bambara, Maninka, and Dyula.[2] Maninka, however, is a
name which encompasses a large number of varieties. Some
of the varieties considered to be Maninka dialects are more
similar to varieties considered to be Bambara or Dyula than
they are to other varieties considered to be Maninka. The
Manding dialect spoken in Seguela, Worodugukan, has been
considered one of the Maninka dialects (Lavergne de Tressan,
Frick and Bolli).

Bambara

Maninka

Eastern Dyula

Touba
Koyaga Dialects
Mankano
Seguela

THE IVORY COAST
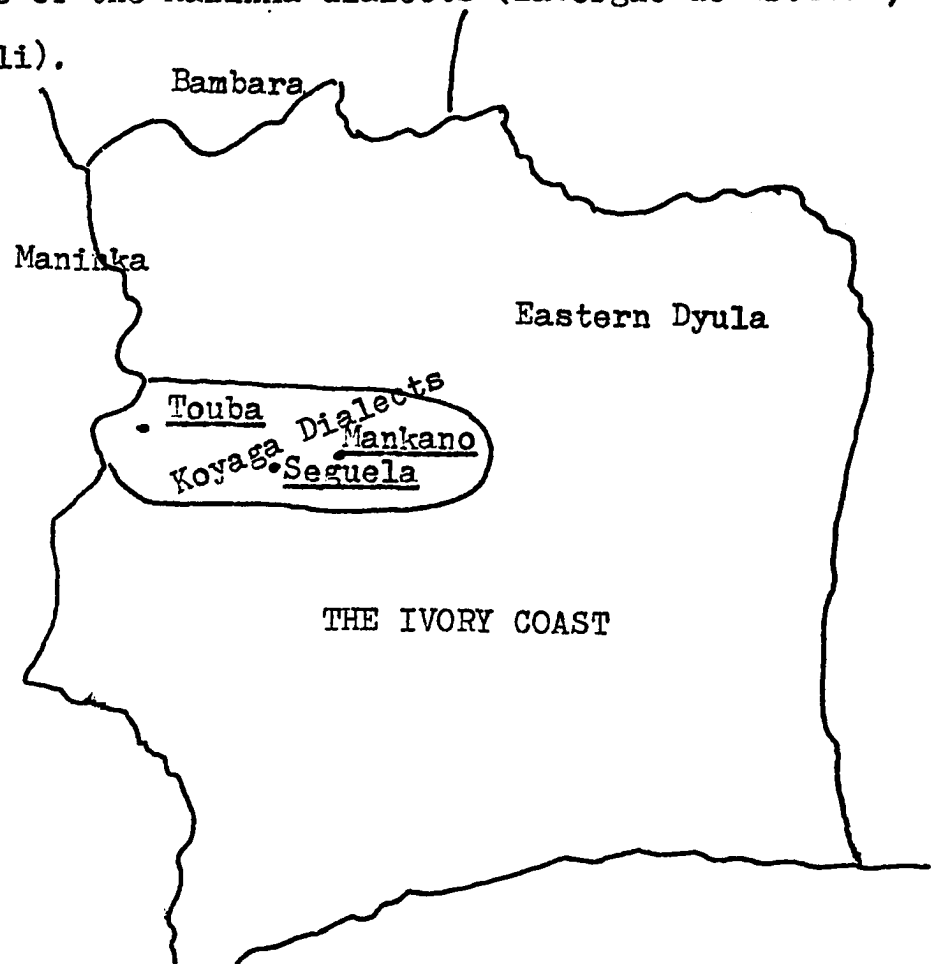
[2] The term "Dyula" is used by different scholars to refer
to two similar but discrete varieties. To avoid confusion,
I would call the variety described by Delafosse (1901,1924)
"Eastern Dyula", and the variety described by Long and Dia-
monde "Commercial Dyula.

My own investigation, however, has indicated that, along with two or three other varieties, Worodugukan is part of a subgroup within the Maninka dialects, a subgroup which I would like to call the Koyaga dialects. These include Mau or Mau-kan, spoken in Touba; Koyaga, spoken in Mankono; and Worodugukan, spoken in Seguela and Kani. All of these are spoken in the west of the Ivory Coast.

The Koyaga dialects have not been investigated by linguists. Many Ivoirians appear to consider them a unit, however, and they often are all called "Koyaga". Furthermore, a brief survey indicates that they share certain linguistic characteristics - reduction of CVCV structures and the appearance of the fricative $[\phi]$. Further investigation is necessary; however, this study will compare Worodugukan only with varieties for which previous studies exist.

The Manding dialects with which Worodugukan will be compared are the Maninka of Faranah, Guinea; Bambara, the Maninka of the Gambia, here called Mandinka; Kuranko, spoken in Sierra Leone; Eastern Dyula; and Commercial Dyula. Northern Mande varieties included in comparison are Vai and, to a limited extent, Khassonke. Recent studies such as that of Long (1971) suggest that Vai and Khassonke ought to be considered as belonging to the Manding dialect complex.

B. <u>Organization</u>

The thesis will consist of two main parts, a section on phonology and a section on morphology and syntax. In each case, the system of Worodugukan will be outlined and then the

comparison will be made.

In the section on phonology, the morphophonemic inventory of Worodugukan will first be presented, and rules will be stated for deriving phonemic representations from the morphophonemic transcription. Then, phonemic contracts will be illustrated. Third, it will be seen that the phonology of Worodugukan differs from that of other Manding dialects by the presence in Worodugukan of additional fricatives and affricates, and of an additional set of front rounded vowels. The genetic relationship between Worodugukan and other Manding dialects will be explored by demonstrating the processes by which Worodugukan forms can be derived from forms in other dialects. Maninka will be chosen for illustration and taken as representative. Finally, the tonal system of Worodugukan will be discussed. Although a number of problems concerning the tonal system remain to be solved, it is apparent that there are a number of significant differences between the tonal system of Worodugukan and those of other Manding dialects for which tonal data is available.

The section on morphosyntax will be divided into three main parts. First, the morphology of the noun phrase and the verb phrase in Worodugukan will be presented and compared to corresponding structures in other Manding dialects. Second, the basic sentence patterns of Worodugukan will be presented, and similar patterns will be shown to exist for other varieties. Finally, the tense/aspect system of Worodugukan will be presented and compared primarily with those of other Manding

varieties.

The study demonstrates that Worodugukan is very innovative in terms of phonology, but that it is quite conservative in terms of morphology and syntax. The phonology and the tone can be compared to other Manding varieties by showing that in many cases additonal rules are necessary for Worodugukan. On the other hand, there is a unity in the general morphosyntactic patterns of Manding dialects to which Worodugukan conforms. There are no essential differences syntactically between Worodugukan and other Manding dialects, although the phonology of Worodugukan occasionally masks its underlying structure. There are, as mentioned, great areas of similarity, in terms of morphology and syntax, between the Manding dialects and other Mande varieties.

In citing data, the transcription for languages other than Worodugukan will be in the transcription of the original source, although tonal markings will be left off. [3] Except where phonetic or phonemic transcription is specified, underlining merely indicates original transcription for non-Worodugukan data.

[3.] Bird's materials on Bambara (1966a, 1966b, 1968) and Spears's data on Maninka (1965,1968,1971,1972a,1972b) are in morphophonemic transcription. The Gambian Mandinka data is in an orthography devised by Rowlands. My own field noted for Commercial Dyula are in morphophonemic transcription; my field notes of Koyaga and Odienne Maninka are broad phonetic. The transcriptions in a number of works appear to be broad phonetic: Delafosse's Eastern Dyula data, the Kuranko grammar, the missionary Bambara grammar and Koelle's Vai data. Only the first of these distinguishes between closed and open vowels, between [e] and [ɛ], and between [o] and [ɔ]. In cases where the correct vowel quality is known, I have taken the liberty of changing it.

The Worodugukan data is entirely my own. The very fragmentary data from Koyaga and Odienne Maninka is likewise mine. The Commercial Dyula material is entirely my own, but Long and Diamonde's _Basic Dyula_ course exists for corroboration. The rest of the material used for comparison varies enormously in quality and scope. Some of the earlier studies, such as that of Eastern Dyula by Delafosse (1901,1924) and that of Vai by Koelle, were done within a very traditional framework. Other material is quite limited in scope, treating only phonology, as, for example, does Klingenheben's observations on Khassonke.

Therefore, all conclusions reached in this study must be somewhat tentative. Data on more Manding dialects and increased knowledge of varieties for which material already exists will, no doubt, modify some generalizations made in this study.

There has been a recent surge in the number of articles dealing with comparisons of Mande and Manding varieties. Recent work by Bird, Spears, Mannessy, Long, and others have shown that significant work can be done in areas which have thus far been neglected. It is hoped that the Worodugukan material will add to the growing bank of data which can aid researchers and that the tentative conclusions reached in the comparative sections will further work in comparative Mande studies.

II. PHONOLOGY

In this section, the phonological system of Worodugukan will be described and will be compared to the systems of other Manding dialects. The tonal system of Worodugukan will also be discussed.

Worodugukan phonology will first be described synchronically without reference to other dialects. The morphophonemic inventory will be presented, and rules will be given for deriving the phonemic representation from the morphophonemic transcription. Phonemic contrasts will then be illustrated, and rules will be given for deriving the phonetic representation from the phonemic representation.

Following the synchronic description of the segmental phonology, comparative data will be introduced, and the genetic relationship between Worodugukan and other Manding dialects will be explored. It is in this area that Worodugukan is of special interest. Although the morphology and syntax of Worodugukan are in most cases identical to the morphology and syntax of other Manding dialects, Worodugukan is quite innovative in terms of phonology. Worodugukan differs from other Manding dialects in that it has additional phonemes and also in that it has morphophonemic rules which are not operative in most Manding dialects. The correspondences can be explained by assuming that some Worodugukan phonemes are the result of specific sound changes and that the Worodugukan phonological system developed from a system

8.

1.

very much like present-day Bambara or Maninka.

Three types of transcription will be used in this section: morphophonemic, phonemic, and phonetic. Examples of two sentences in all three transcriptions are:

{n yɛ wön saba san La}　"I am buying three chimps"

/n yɛ wön ɛaba san na/

[ŋ yɛ wö zaᴘa sana]

{čɛo ye wü kien san}　　"The man bought one dog"

/čɛɛ ye wü kien ɛa/

[čɛɛ ye wü kie za]

The morphophonemic transcription demonstrates generalities that are not demonstrable at the phonemic level. For example, all of the morphemes in these two sentences, with the exception of ye, have more than one allomorph.　Kien has potentially eight phonologically conditioned allomorphs. They are:

/kie/	/gie/
/kiem/	/giem/
/kien/	/gien/
/kieɲ/	/gieŋ/

A purely phonemic representation does not permit one to assign a single form to the morpheme and to predict the

---

1. Bambara and Maninka are most often used as examples because the best and most recent descriptions exist for them. Commercial Dyula, Eastern Dyula, and Gambian Mandinka might also be usable if appropriate descriptions were available. Vai, and to a lesser extent, Kuranko, appear to differ from the other dialects in a number of respects.

phonemic shape of the allomorphs.

A. Morphophonemic Inventory

The morphophonemes of Worodugukan will be given, then the phonemic inventory. A statement will then be made about which morphophonemes dominate which phonemes. The morphophonemes are: [2.]

b	t	d	k	g	gb		i	e	ɛ	a	ɔ	o	u
ɸ	f	s	š	h			ü	ö	ɔ̈			
m	n	ŋ					ī	ē	ā	ɛ̄	ȫ
č	ǰ										
w	y	l	L[3.]	r							

The phonemes of Worodugukan are:

	Bilabial	Alveolar	Palatal	Velar	Labiovelar	Glottal
Voiceless stops [4.]		t	č	k		
Voiced stops	b	d	ǰ	g	gb	
Fricatives	ɸ f	s	š			h
Nasals [5.]	m	n		ŋ		
Sonorants		r	y		w	
		l				

---

2. The phonemes will be listed in terms of place of articulation and manner of articulation. The morphophonemes are not so listed because a given morphophoneme may dominate phonemes of different places of articulation or manners of articulation. L, for instance, dominates both /l/ and /n/ in different contexts.

3. A capital L is used here because the morphophoneme L, like the morphophoneme l, dominates the phoneme/l/, although l dominates only /l/ while L dominates /l/ and /n/. Conventionally, a capital letter, an odder symbol in this context, is used for less frequently occurring morphophonemes.

4. Affricates will be included with stops here.

5. m and n do not occur syllable finally.

6.
Vowels:

i ü   u

    e   ö   o

        ε   ɔ̈   ɔ

            a

ĩ   ũ

        ṏ

            õ

    ε̃   ɔ̃

        ã
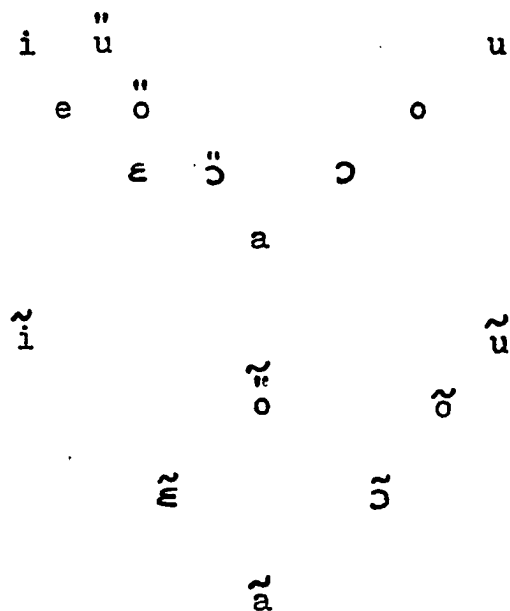
The rules governing the relationship between the mor-phophonemic representation of Worodugukan and the phonemic representation are as follows:

1. Voiceless stops and affricates are voiced after n̲; that is, t̲ dominates /d/ after n̲. Otherwise, it dominates /t/. č̲ dominates /ǰ/ after n̲; otherwise, it dominates /č/. k̲ dominates /g/ after a nasal; otherwise, it dominates /k/. 5.

{tɔgɔ}	/tɔgɔ/	"name"
{n tɔgɔ}	/n dɔgɔ/	"my name"
{č̌ε}	/č̌ε/	"man"
{blan-č̌ε}	/blan-ǰε/	"male inlaw"
{ko̎-č̌ε}	/ko̎-č̌ε/	"older brother"
{an ko̎-č̌ε}	/aŋ go̎-č̌ε/	"our older brother"

2. When preceded by n̲, L̲ dominates /n/. Otherwise, it dominates /l/.

| {kean-Li-kε} | /kean-ni kε/ | "learning" |
| {kea Li kε} | /kea-li kε/ | "sewing" |

3. n̲ is homorganic before stops, nasals, and semivowels.

That is, n̲ dominates /m/ before b̲ and m̲, /ŋ/ before k̲, g̲, gb̲, and w̲. Otherwise, it is /n/. [7]

4. Back vowels are nasalized before n̲. That is, u̲ dominates /ũ/ before n̲ and /u/ otherwise, o̲ dominates /õ/ before n̲ and /o/ otherwise, and ɔ̲ dominates /ɔ̃/ before n̲ and /ɔ/ otherwise. [8]

[jɔn]	/jɔ̃/	"slave"
[bon]	/bõ/	"house"
[kun]	/kũ/	"head"

5. n̲ is deleted when it is not followed immediately by a stop, a semivowel, or a nasal. [9]

[min]	/mi/	"to drink"
[bon]	/bõ/	"house"
[a san]	/a sa/	buy it"

6. Otherwise, each morphophoneme dominates a single phoneme in all contexts; e.g., b̲ dominates /b/, d̲ dominates /d/, etc.

These are the rules which relate the inventory of morphophonemes to the inventory of phonemes. The rules must be partially ordered. Rule 4 must come before rule 5; otherwise, the conditions for nasalizing back vowels would be eliminated. [10]

---

[7] Nasals are also homorganic before palatal consonants, but this will be handled by an allophonic statement, as this analysis does not consider there to be a palatal nasal phoneme in Worodugukan.

[8] The examples here are understandable only in connection with rule 5. There is, at present, no explanation for why this rule applies only to the three back vowels (it does not apply to a̲).

[9] In the course of field research, it was found that this rule applied when n̲ occurred at the end of a response - either a morpheme or a short sentence. It is not known what sort of pause or potential pause would have to occur for this rule to apply.

[10] Nasal back vowels at the phonemic level can be analyzed at the morphophonemic level as vowel plus nasal. There are other phonemic nasal vowels which cannot be so analyzed and thus, nasal vowels at the morphophonemic level are posited in this analysis. These will be further discussed below.

Otherwise the rules deal with a mutually exclusive set of classes of sounds which can follow n̲, and thus, none of the rules operates on the output of another.

B. Special Morphophonemic Statements

These are the phonologically conditioned morphophonemic rules. Before illustrating the phonemic contrasts, it would be well to list the set of special morphophonemic processes - processes which are idiosyncratic to particular morphemes in Worodugukan and which do not represent phonological generalities operating throughout the language. Two morphemes require special statements - the specific determiner suffix {o} and the copula {yɛ} .

The definite suffix, when it does not follow a nasal consonant, is phonemically /o/:

| {čɛ} | /čɛ/ | "male" |
| {čɛo} | /čɛo/ | "the man" |

When the definite suffix follows a noun which ends in a nasal at the morphophonemic level, the definite marker is /ɔ̃/: [11.]

| {bin} | /bi/ | "grass" |
| {bino} | /biɔ̃/ | "the grass" |

Because a final nasal at the morphophonemic level is not present at the phonemic level, (rule 5), pairs which appear to be homonyms, or homonyms except for tone, are clearly distinguished in the definite form:

| {tama} | /tama/ | "spear" |

[11.] Alternate dialectal forms are /ŋɔ/ and /ŋgo/. Although these alternates have the same priviledge of occurance as does /ɔ̃/, in both forms the /ŋ/ is really part of the root.

{taman}	/tama/	"five franc piece"
{tamao}	/tamao/	"the spear"
{tamano}	/tamaɔ̃/	"the five franc piece"
{gbea}	/gbea/	"bamboo"
{gbean}	/gbea/	"sponge"
{gbeao}	/gbeao/	"the bamboo"
{gbeano}	/gbeaɔ̃/	"the sponge"

When the definite marker is followed by another morpheme, and when it is not preceded by a nasal, the vowel quality may assimilate to the quality of the preceding vowel:

{n ye deleo san} /n ye delee sa/ "I bought the dress"

The double vowel and the tonal contour of the noun phrase indicate that the noun phrase is in the definite form.[12.]

The copula {yɛ} combines with the various pronouns by unique morphosyntactic processes summarized in the following table:

{n} + {yɛ}	is /ŋyɛ/[13.]	e.g., /ŋyɛ san na/ "I buy it"
{i} + {yɛ}	is /i/	e.g., /i san na/ "you buy it"
{a} + {yɛ}	is /e/	e.g., /e san na/ "he buys it"
{an} + {yɛ}	is /aɲyɛ/	e.g., /aŋ yɛ san na/ "we buy it"

[12.] Tone will be discussed later in this section.

[13.] There is a general tendency to delete the copula in Worodugukan. In this case, however, the copula is deleted for the second person singular pronoun even where it is included elsewhere in the paradigm. /i yɛ/ is possible, but it occurs only when the informant is being very slow and careful.

[alu] + [yɛ] is /aa yɛ/ ^14. e.g., /aa yɛ san na/ "you buy
                                                      it"

{alu} + {yɛ} is /aa yɛ/ e.g., /aa yɛ san na/ "they buy
                                                      it"

Finally, the third person singular pronoun is deleted segmentally when it is the direct object. The examples above illustrate this process:

[n yɛ a san La] is /ŋ yɛ san na/ "I buy it" or "I am buy-
                                                    ing it"

Thus, special morphophonemic statements are necessary governing the shape of the specific determiner after a nasal, governing the phonemic shape of the pronouns plus the copula, and governing the deletion of the segmental representation of the third person singular pronoun, in addition to the phonologically conditioned morphophonemic rules. Together, these account for the way in which phonemic representations of Worodugukan morphemes are related to morphophonemic representations.

C. _Phonemic Contrasts_

The phonemic contrasts will be illustrated at this point, and then rules for converting the phonemic representation to a phonetic representation will be presented. The phonemes of Worodugukan have been listed on page 10, above.

There are four voiced stops in Worodugukan, the respective places of articulation of which are bilabial, alveolar,

---

14. These two pronouns differ tonally. It should be mentioned that in Maninka and Bambara the second and third person singular pronoun can be analyzed as the singular pronouns plus the plural marker. For this reason, in the analysis {alu} becomes /aa/, although there is not synchronic evidence for such an underlying form in Worodugukan.

velar, and labiovelar. Of these, /b/ occurs both intervocal-
ically within a morpheme and morpheme initially. In the cor-
pus, at least, /d/ and /gb/ occur only initially. /g/ occurs
primarily intervocalically. In the words go, "corn", bor-
rowed from neighboring Gouro, and goa, "indigo", which is
gara in some dialects and kara in others, it is initial.[15]
Contrasts among the voiced stops include:[16]

/ba/	"goat"
/da/	"door"
/gba/	"kitchen"
/daga/	"pot"
/daba/	"hoe"

There are two voiceless stops in Worodugukan, /t/ and
/k/. Neither occurs intervocalically within a morpheme in
the data. They contrast in the following pairs:

/to/	"a food"
/ko/	"affair"
/kɔgɔ/	"salt"
/tɔgɔ/	"name"

The alveolar stops contrast in the pair:

/tɔgɔ/	"name"
/dɔgɔ/	"younger sibling"

The velar stops contrast in the pair:

---

[15]. It seems that historically, [k] and [g] may have been al-
lophones of a phoneme and that [t] and [r] may have been allo-
phones of a phoneme.
[16]. These are not true minimal pairs because tone is not
taken into account.

/kea/   "bow"

/gea/   "indigo"

There are five voiceless fricatives in Worodugukan - /φ/, /f/ and /s/, /š/ and /h/. All of the words in the corpus containing /h/ are borrowings from Arabic and do not contrast with other morphemes in the corpus. [17] The fricatives contrast with one another in the following morphemes:

/φɔ/   "back"

/fɔ/   "to say"

/fɛ/   "near"

/šɛ/   "calabasse"

/so/   "town"

/šo/   "horse"

/φo/   "to wash"

Voiced fricatives exist in Worodugukan at the phonetic level, but in this analysis they are allophones of the voiceless fricative phonemes. They will be discussed later in this section.

There are two affricates in Worodugukan, /č/ and /ǰ/. They contrast in the following pair:

/čie/   "forehead"

/ǰie/   "cobbler"

They also contrast with stops:

[17.] /hali/, an intensifier; /hɔrɔn/, "good"; /hakɛ/, "sin"; /hɛrɛ/, "peace"; and /hakii/, "intelligence", are all given as Arabic borrowings by Bazin.

/dʒɔ̃/	"to dance"
/ǰɔ̃/	"slave"
/tu/	"forest"
/čǔ/	"mortar"

There are two sonorants in Worodugukan, /l/, a voiced lateral, and /r/, an alveolar trill. As will be seen in the comparative section below, these two phonemes do not correspond very exactly to sonorants in other Manding dialects.

There is reason, in fact, to question whether /r/ ought to be included in the Worodugukan inventory. It appears only between a consonant and a vowel, and almost always in those morphemes in which it is found in the corpus, an alternate pronounciation is also found. Morphemes in which /r/ appears are:

/fri/	"to throw"
/fra/	"to tear"
/bra/	"rat"

The alternate pronunciations are /fii/, /fea/, and /bea/, respectively. When one informant was asked the difference between /fra/ and /fea/, he suggested that /fra/ was more emphatic.

An explanation suggests itself, one that will be clearer after the comparative data has been presented. /r/ appears in Worodugukan in morphemes that have an intervocalic /r/ or /l/ in other varieties. However, most medial /r/'s and medial /l/'s have been lost in Worodugukan; the alternate pronuncia-

tions above represent the most common reflexes of original medial sonorants in Worodugukan. This suggests that the forms with /r/ are archaic forms retained only for emphasis.

/l/ occurs primarily morpheme initially in Worodugukan. Initially, /l/ contrasts with both the voiced and voiceless alveolar stops:

/lɔgɔ/	"market"
/tɔgɔ/	"name"
/dɔgɔ/	"younger sibling"

Although /l/ does occur intervocalically in a number of morphemes in Worodugukan, it does not occur there in all of the places where other dialects have medial /l/'s. Examples of intervocalic /l/ are:

/dele/	"bubu"
/sɛlɛ/	"witness"
/kalo/	"moon"

It also appears between a consonant and a vowel:

/fla/ (also, /fea/)	"medicine"
/bla/	"inlaw"
/kabla/	"clan"

There is also a group of words which begin with the cluster /klw.../. They are:

/klwana/	"koran"
/klwa/	"plate"
/klwani/	"pigeon"
/klwanya/	"bitterness"

There are three nasal consonants in Worodugukan. The places of articulation are bilabial, alveolar, and velar; /m/ and /n/ contrast initially:[18]

/nɔ/	"track"
/mɔ̌/	"old person"

The three nasals contrast intervocalically:

/nɔmɔ/	"to sit"
/nɔnɔ/	"milk"
/nɔŋɔ/	"elbow"
/fama/	"duration"
/faŋa/	"strength"

As has been stated earlier, the morphophoneme n̠ is realized as all three phonemes in different contexts:

/am bɛma-čɛ/	"our grandfather"
/an dɔgɔ-čɛ/	"our younger brother"
/aŋ go̎-čɛ/	"our older brother"

There are two semivowels in Worodugukan, /w/ and /y/; /w/ occurs initially, as well as between a consonant and a vowel:

/wɛ/	"money"
/wu̎/	"dog"
/bwi/	"to run"

The other semivowel is /y/. It appears in three of the

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[18] /ŋ/ does not occur initially. It occurs medially where other dialects have a velar nasal plus a velar stop. Clearly Worodugukan has come about historically from a nasal plus a stop. One might want to remove it from the inventory of morphophonemes and consider /ŋ/ to be a result of a morphophonemic rule.

tense/aspect markers:

/ye/

/ya/

/yɛ/ 19.

It also occurs initially in several other morphemes, such as:

/yusu-yusu/	"to shake"
/yan/	"here"
/yɛma/	"to change"

/y/ also occurs between a consonant and a vowel:

| /byɛ/ | "horn" |
| /so fyɛni/ | "donkey" |

D. Vowel Phonemes

Worodugukan has ten oral vowel phonemes; three unrounded front vowels, three rounded front vowels, three rounded back vowels, and one central low unrounded vowel. In the corpus all except /u/ and /ö/ contrast as follows:

/bi/	"today"
/bɛ/	"all"
/be/	"to go"
/bü/	"bread"
/bö/	"hand"
/ba/	"goat"
/bo/	"excrement"

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19. The morphophonemic rules governing yɛ are different from those governing other morphemes beginning with /y/, suggesting perhaps that /yɛ/ was historically derived from /kɛ/ or /wɛ/ (see sections on morphophonemics and on tense/aspect markers).

/bɔ/	"to leave"

Pairs involving /u/ and /ɔ̈/ are:

/tu/	"forest"
/tü/	"oil"
/tö/	"ear"
/tɔ̈/	" a predicator"

There are seven nasal vowels in Worodugukan at the phonemic level: /ĩ/, /ɛ̃/, /ã/, /ɔ̃/, /õ/, /ũ/, and /õ̃/. Examples of oral-nasal contrasts include:

/sĩ/	"tomorrow"
/si/	"none"
/kɛ̃/	"light"
/kɛ/	"to do"
/sã/	"to peel"
/sa/	"to die"
/bõ/	"house"
/bo/	"excrement"
/jɔ̃/	"slave"
/dɔ/	"some"
/kũ/	"head"
/ɸu/	"yam"
/sõ̃/	"hyena"
/tö/	"ear"

As we have seen, back vowels at the phonemic level are vowels plus nasals at the morphophonemic level. The front and central nasal vowels cannot be accounted for in this way.

When morphemes with front nasal vowels are followed by other
morphemes, they do not show any evidence of a nasal consonant.
Also, unlike nasal vowels which are at the morphophonemic
level vowel plus nasal, the front nasal vowels do not corre-
spond to vowels plus nasals in other Manding dialects. Rather,
the cognates to these nasals in Worodugukan have a consonant
vowel nasal vowel structure in other Manding dialects.[20]

E. Length

Length in Worodugukan is a sequence of two vowels. Single
vowels and double vowels contrast, although the functional
load of such a contrast is not high. Minimal pairs, tone ex-
cluded, are:

/šea/	"peanut"
/šeaa/	"sacrifice"
/bɛbɛ/	"pepper"
/bɛɛbɛɛ/	"good"
/si/	"fly"
/sii/	"race"

There are two sources for double vowels and some instan-
ces of double vowels that do not seem to be explainable by
either of the two sources.

One source is historical: the collapsing of CVCV struc-
tures. As will be noted in the section on comparative phono-
logy, /iri/ or /ili/ in other dialects correspond to /ii/ in

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[20] This will be explicated in the comparative section. It
should be noted here, however, that the absence in Worodugu-
kan of /ẽ/ is to be expected because one finds few morphemes
if any containing [-ene] in other varieties, although there
are many containing [-ɛnɛ] .

Worodugukan.

Examples of double vowels from this source are:

/fii/   "to throw"

/mii/   "to think"

Two of the examples above can be given a historical ex-
planation, although they do not obey the usual sound corre-
spondences:

/šeaa/   Bambara: salaka

/bɛɛbɛɛ/   Bambara: bɛrɛ

A second source of double vowels is the partial assimi-
lation of a morpheme. For my principal informant, the third
person plural morpheme was /aa/. However, for one Worodugukan
speaker, the third person plural morpheme was /alu/, clearly
the third person singular morpheme plus the plural morpheme.

This, in fact, corresponds to the facts in Maninka and
Bambara, where the third person plural morpheme consists of
the third person singular pronoun plus the plural.

The definite marker or specific determiner, /o/, is
often partially assimilated in this manner:

/ka dele sa/   "to buy a bubu"

/ka deleo sa/

          or

/ka delee sa/   "to buy the bubu"

In this analysis, double vowels from this source are the
result of morphophonemic rules which assimilate vowel quality.

/sii/ is a morpheme which cannot be explained from either

source. It must be considered to have double vowels at the morphophonemic level and the phonemic level.

F. Allophonic Statements

In order to derive a phonetic representation from the phonemic representation, two statements are necessary. The first states the distribution of allophones for /n/, /b/, /g/, /ɸ/, /f/, /s/, and /š/. Second, there must be a rule deleting the nasal phoneme before fricatives. [21]

/n/ has an allophone [ɲ] before palatal consonants. Otherwise, it is the alveolar stop, [n] . Thus, /fanya-fɔ-la/, "liar", is phonetically [faɲyafɔla] . /n/ may also be deleted (see below).

Palatal nasals are treated differently in Maninka by Spears (1965) and in Bambara by Bird (1966a). Spears' analysis of Maninka has a palatal nasal phoneme. Bird considers the palatal nasal to be a sequence of stop plus semi-vowel. For Worodugukan, the latter treatment seems preferable, as many other consonant semi-vowel sequences are found in the language. Therefore, an allophonic statement is necessary.

Both /b/ and /g/ have voiced fricative allophones intervocalically:

| /saba/ | [saβa] |
| /saga/ | [saɣa] |

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[21] The nasal consonant must be present at the phonemic level in order to govern the choice of allophones. It is not present in the phonetic representation, however. In this analysis, there are two rules deleting nasals, one preceding the phonemic representation and one following it. The first deletes nasals before a potential pause, and the second deletes nasals before fricatives. This solution will avoid positing a series of voiced fricatives yet will also preserve a phonemic level of representation.

Otherwise, /b/ and /g/ are voiced stops.

The voiceless fricatives have voiced allophones after nasals. The nasals are then deleted:

/jamfa/	[ǰava]	"treason"
/n ɸɔ/	[βɔ̰]22.	"my back"
/wɛnsɛ/	[wɛzɛ]	"jackal"
/kun-ši/	[kuǰi]	"hair"

Geminate nasals are realized phonetically as single consonants; thus, a nasal is also deleted in this case:

| /m muso/ | [muso]23. | "my wife" |

These, then, are the processes by which a phonetic representation is derived from a phonemic representation. One can now follow a sentence from the morphophonemic representation to the phonetic representation:

{n yɛ kugben saba san La}   "I am buying three rats"

L dominates /n/ after n. n dominates /ŋ/ before the morpheme {yɛ}. Otherwise, in this example, k dominates /k/, u dominates /u/, etc. The resulting phonemic representation is:

/ŋ yɛ kugben saba san na/

The intervocalic allophone of /b/ is [β]; the allophone of /s/ after a nasal is [z]. The nasal before the fricative is deleted, as is the double nasal. Thus:

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22. The allophone [ƻ]of /ɸ/ is phonetically different from the allophone [β]of /b/. The former is more tense, with some lip rounding.

23. /m muso/ can be differentiated from /muso/, "woman" on the basis of tone (see page 45, below). Both, however, are [muso] segmentally.

[ŋ yɛ kugbe zaβa sana]

Thus, the phonology of Worodugukan has been described synchronically without reference to other Manding dialects. What is interesting, however, is the relationship between the phonology of Worodugukan and the phonology of other Manding dialects. Worodugukan manifests a number of striking innovations that the major Manding dialects for which descriptions exist do not exhibit. As a result, it is possible to derive Worodugukan forms from attested forms in other dialects. In the following section, lists of cognates will be presented, and then the genetic relationship between Worodugukan and other Manding dialects will be explored.

G. Lists of Cognates

Although data is not abundant, as might be hoped for all of the Manding dialects, the number of cognates which Worodugukan shares with other dialects appears to be remarkably high. Bambara and Maninka, according to Long (1972), share 92 cognates of a 100 word list. My own calculation indicates that Worodugukan shares over 90 percent agreement with both Bambara and Maninka. Below is a list of cognates based on Long's list but reduced in number. It will illustrate correspondences to Worodugukan sounds.[24] Of special interest are those cognates in Maninka, Bambara, and other varieties for Worodugukan /ɸ/, /ŋ/, /č/, and /š/ among consonants and for Worodugukan /ü/, /ö/, /ɔ̈/, /ie/, and /ea/ among the vowels.

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[24]. My calculation suggests 96/100 between Worodugukan and Maninka and 93/100 between Worodugukan and Bambara. Looking at Long's list, however, I would have considered Bambara and Maninka to have a higher number of cognates than 93.

	WDK	Man	Bam	Xas	Mau	Koy	Vai	Kur	Mnd
/m/									
"person"	mɔgɔ	mɔ	mɔgɔ	mɔgɔ	mɔ	mɔ	mɔ	mogo	moo
"women"	muso	muso	muso	muso	moso	moso	musu	musu	musu
/n/									
"come"	na	na	na	na	na		na	naa	na
"cock"	donin	don-don	dono		lona	sisɛ-dondo		don-don	
/ŋ/									
"strength"	faŋa	fanka	fanga						
/b/									
"hand"	bö	bolo	bolo	bulo	boo	buru	bolo	bolo	bulu
"three"	saba	saba	saba	saba	sawa		sak-pa	sawa	saba
/d/									
"child"	den-in	de	de	den-den	diɛn	den-in	de	den	den
"door"	da	da	da	da	la		da	de	daa
/g/								26.	
"sit"	sigi	si	sigi	sigi	si 27.		sii 28.	sigi	sii
"go"	taga		taga	taXa			ta	ta	taa

25. The first three languages, Worodugukan, Maninka, and Bambara, are in morphophonemic transcription. Xhassonke, Mau, Koyaga, and Vai are in phonetic transcription; Mau and Xhassonke, as well as Gambian Mandinka, were personally transcribed by Long and Dalby, Vai by Koelle, and Koyaga by me. The transcription in the last two is "missionary". Except where footnotes indicate otherwise, citations are taken from Long (1972).

26. Long records this as "si".

27. Klingenheben, p. 6.

28. Heydorn (1970).

	WDK	Man	Bam	Xas	Mau	Koy	Vai	Kur	Mnd
/k/									
"read"	kean	kar-an	kal-an		ka [29]	kra	kala	kar-an [30]	kar-an
"bone"	ko	kolo	kolo	pulo	koo		kulu		
/t/									
"name"	tɔgɔ	tɔ	tɔg	tɔgɔ	dɔ [31]		tɔ	togo	too
/gb/									
"skin"	gbö	gbo-lo	wolo	gulo	gboo		kpo-lo		kulu
/f/									
"black"	fin	fin	fin	fin	fin-ni		fil-ima	fin	
"father"	fa	fa	fa	fa	fa		fa	fa	
/ɸ/									
"greet"	ɸo	kɔn-dɔŋ	fo		fo		sua [32]	kon-ton	kon-tong
"wash"	ɸo	ko	ko	ku	kwo	ɸo	ko	ku	kuu
"yam"	ɸu	ku	ku		ku [33]	ɸu			
"back"	ɸɔ	kɔ	kɔ		ɸɔ [34]	ɸɔ	kɔ		
"millet"	ɸɛ̃		fini						

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[29] My own data.

[30] Heydorn (1970).

[31] Possibly, Long has elicited "my name" unwittingly.

[32] Heydorn (1970).

[33] My own data.

[34] My own data.

	WDK	Man	Bam	Xas	Mau	Koy	Vai	Kur	Mnd
/s/									
"snake"	sã	sa	sa	saa	sa	sa	kaa		
"chicken"	sisɛ	sisɛ	syɛ					sisi	sisi
"town"	so	so	so					sui	
/š/									
"to sell"	šile	fere	fee-re				fele 35.		
"horse"	šo	so	so		so 36.		so	suu	suii
"calabash"	še	fɛ	flen						
"road"	šea	sila	sira				kila 37.	kila	
"odor"	šo"	sum-an	suma					suma	
"copper"	šoa		nsi-ra						
/h/									

no sets of correspondences will be given

/l/	WDK	Man	Bam	Xas	Mau	Koy	Vai	Kur	Mnd
"lie"	la	la	da	la	la		sa	sa	la
"know"	lo	lo	do						lung
"moon"	kalo	karo	kalo	xaro	kalo		kalo	kɛrɛ 38.	karo
/r/									
"throw"	fri	fili	fili				fili 39.		

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35. Heydorn (1970).

36. My own data.

37. Heydorn, p. 35.

38. Taken from Long.

39. Heydorn (1970).

	WDK	Man	Bam	Xas	Mau	Koy	Vai	Kur	Mnd
"beer"	drɔ	dɔlɔ	dɔlɔ						

/č/

	WDK	Man	Bam	Xas	Mau	Koy	Vai	Kur	Mnd
"man"	čɛ	kɛ	čɛ	xia- ba	čɛ	čɛ	kai	kei	kee
"forehead"	čie	ti	te						
"palm"	če	ti	te						
"middle"	čɛma	tama	če						
"way"	čogo		čogo						

/ǰ/

	WDK	Man	Bam	Xas	Mau	Koy	Vai	Kur	Mnd
"rope"	ǰu	yulu	ǰuru	ǰulu	ǰuu		ǰulu		julu
"tree"	ǰiː	ǰiri	ǰiri	ǰirɔ	yii	yiri	kɔŋ		
"water"	ǰe	yi	ǰi	ǰi	ǰi	ǰi	ǰi		ǰii
"see"	ǰe	ye	ye	ǰe	ye		fɛlɛ	yen	ǰe

/y/

	WDK	Man	Bam	Xas	Mau	Koy	Vai	Kur	Mnd
"here"	ya	ya	ya	jan	jan[40]	ya	niyɛ		jang
"turn"	yɛː- ma	yɛlɛ- ma	yɛlɛ- ma					yele- ma	

/w/

	WDK	Man	Bam	Xas	Mau	Koy	Vai	Kur	Mnd
"dog"	wü	wulu	wulu	wulu	wuu	uru	wulu	wulu	wulu
"money"	wɛ	wodi	wari						

Many of the Worodugukan vowels correspond on a one to
one basis with vowels in other varieties. It would be worth-
while, however, to present correspondences for the Worodugukan

[40]. My data provides "ya" for Mau.

front rounded vowels and for Worodugukan vowels which are
analyzed here as nasal at the morphophonemic level.

/ü/

	WDK	Man	Bam	Mdn
"dog"	wü	wulu	wulu	wulu
"oil"	tü	tulu	tulu	tulu

/ö/

"ear"	tö	tolo	tolo	tolo
"bone"	kö	kolo	kolo	kulu

/ɔ̈/

"find"	sɔ̈	sɔrɔ	sɔrɔ	

/ĩ/

"to-morrow"	sĩ	sini	sini	

/ɛ̃/

"field"	sɛ̃	sɛnɛ	sɛnɛ	
"light"	kɛ̃	kɛnɛ	kɛnɛ	

/ã/ [41]

"snake"	sã	sa	saga	sa

/ie/, /iɛ/

"sun"	tie	tele	tele	tele
"war"	kiɛ	kɛlɛ	kɛlɛ	kɛlɛ

H. Exploration of Relationships between Cognates

The above list of cognates is too small to be anything
more than suggestive. What it indicates, and what a larger

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[41] /ã/ is a somewhat doubtful nasal vowel. Although all of
my informants used a nasal vowel in this morpheme, and al-
though it clearly does not behave as an underlying vowel
plus nasal, no explanation for this form has been found.
It appears in a few other morphemes such as sãflao "soap" and
jião "hole".

list would indicate more conclusively, is that while the per-
centage of cognates which Worodugukan shares with other vari-
eties is quite high, that Worodugukan has a number of phonemes
not found in most other varieties.

It is clear that Worodugukan has been innovative at the
level of phonology and that the nature of the sound changes
undergone by Worodugukan can be stated. Unfortunately, it does
not seem to be possible to set up a series of correspondences
which will predict the Worodugukan forms unfailingly on the
basis of forms in other dialects. The problem with attempting
to do so is that some of the changes appear to be sporadic:
/ko/, "affair" or "business" in Bambara and Maninka, is /ko/
in Worodugukan; /ko/, "to wash" in Bambara and Maninka, is
/ɸo/ in Worodugukan. /sɛlɛ/, "witness", exists in Worodugukan;
however, Bambara and Maninka /kɛlɛ/, "war", is /kiɛ/. Nor is
it always possible to predict the Bambara or Maninka form from
a Worodugukan form. Worodugukan /ɸ/, for example, corresponds
to both /k/ and /f/ in other varieties.

What can be done, however, is to show how Worodugukan
forms relate to other forms in those morphemes where a sound
change has occurred. Maninka will be taken as representative,'
although Bambara, Commercial Dyula, Eastern Dyula, Gambian
Mandinka, or Kuranko could also have been used.[42.]

42. The Maninka of Faranah has lost medial [g] 's. (In Bam-
bara, Worodugukan, Commercial Dyula, etc., "to kill" is /faga/;
in Faranah Maninka, it is /faa/), but otherwise can be taken
as representative. Bambara could be taken as representative al-
though /gb/ in other varieties has become in Bambara /g/ or /gw/
or /w/, and most initial /l/'s in other varieties have become
/d/ in Bambara. Other varieties were passed over as representa-
tive because a good quantity of reliable data was not readily
available.

I. Correspondences

For the most part, Worodugukan has lost medial r's (t's in Gambian Mandinka) and l's. Morphemes which, in other varieties, have a CVCV structure with a medial sonorant are CV or CVV in Worodugukan. Whereas in Mau-kan, one of the Koyaga dialects, the sonorants are lost but the vowel quality remains the same, in Worodugukan the loss of the sonorant has occurred concurrent with a change in vowel quality.[43.] In Worodugukan, where sonorants are deleted, back rounded vowels become front rounded vowels of the same height. This can be summarized in the following table:

Maninka	ulu	or	uru	becomes Worodugukan ü
Maninka	olo	or	oro	becomes Worodugukan ö
Maninka	ɔrɔ	or	ɔlɔ	becomes Worodugukan ɔ̈

Examples are Maninka /wulu/, "dog"; Worodugukan /wü/, "dog"; Maninka /tolo/, "ear", Worodugukan /tö/; and Maninka /sɔrɔ/, "to get", Worodugukan /sɔ̈/.

Unrounded vowels become diphthongs when the sonorant is deleted. When the two vowels are identical, the following table expresses correspondences between Maninka and Worodugukan cognates:

Maninka	iri	or	ili	becomes Worodugukan ii
Maninka	ere	or	ele	becomes Worodugukan ie
Maninka	ɛrɛ	or	ɛlɛ	becomes Worodugukan iɛ
Maninka	ara	or	ala	becomes Worodugukan ea

28. See the table of correspondences. Data on Mau-kan is, unfortunately, sparse.

Examples are Maninka /miri/, "to think", Worodugukan /mii/; Maninka /tele/, "sun", Worodugukan /tie/; Maninka /kɛlɛ/, "war", Worodugukan /kiɛ/; and Maninka /marafa/, "gun", Worodugukan /meafa/.

When the vowels of the general Manding forms are not identical and when the second vowel of these is not a, then medial sonorants are not deleted in Worodugukan.[44] When the two vowels are not identical but the second vowel is a in most Manding forms, the Worodugukan cognates take one of two possible alternative forms. Worodugukan forms may have a CVV structure. Examples are:

Maninka	sula	Worodugukan	šoa	"monkey"
Maninka	sila	Worodugukan	šea	"road"
Maninka	yula	Worodugukan	joa	"trader"
Maninka	fila	Worodugukan	fea	"leaf"

This is the same process that occurs when the Maninka forms have identical front vowels. In fact, the quality of the diphthong in Worodugukan can be predicted when it occurs in both cases by the following rule: the second element of the diphthong is identical to the original second vowel; the first element of the diphthong is two vowels higher or as high as possible (when the second element is [i] , it is not possible to go higher for the first vowel). Thus, when the second vowel of the Maninka form is a, the Worodugukan diphthong will have

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[44] No explanation has been found for this generalization. Nevertheless, it seems to hold true. Forms like /kalo/, "moon" in Maninka are identical in Worodugukan.

a̲ as its second vowel and either [e] or [o] as the first vowel
of the diphthong. When the second vowel of the Maninka form is
[ɛ] or [e] , the Worodugukan form will have that vowel as the
second element in a diphthong and [i] as the first element.

There is one important difference between the situation
in which the vowels in the Maninka forms are identical and
the situation in which they are not. In the former case, there
seem to be very few exceptions in terms of correspondence be-
tween the forms in other Manding dialects and the Worodugukan
forms. In the latter case, some morphemes in Worodugukan do
not manifest diphthongs but rather have a CCV structure: [45.]

Maninka	fila	Worodugukan	fla	"two"
Maninka	biran	Worodugukan	blan	"in-law"
Maninka	mira	Worodugukan	mla	"to catch"

Thus, it is possible to state that a Worodugukan cognate
will have either a diphthong or a sonorant, but at the present
state of the analysis, at least, it is not possible to pre-
dict which.

Nasal vowels in Worodugukan also correspond to CVCV struc-
tures in other varieties. Again, it would seem that there is
a general tendency to collapse CVCV structures going on in
Worodugukan. Examples are:

| Maninka | sini | Worodugukan | sĩ |
| Maninka | sɛnɛ | Worodugukan | sɛ̃ |

_____

[45.] It should be remembered at this point that certain forms
have emphatic allomorphs with a CVV structure and [r] as the
second consonant; e.g., Maninka /fara/, "to tear"; Worodugu-
kan /fea/, but also /fra/ (see above, page 18).

Maninka   kɛnɛ   Worodugukan   kɛ̃

J. Correspondences - Consonants

Worodugukan is also characterized by consonants not found in many Manding dialects. The most striking of these is /ɸ/, found only in the Koyaga dialects.[46] As has been stated, two things are puzzling about this development in Worodugukan: first, that it seems to be sporadic, and second, that /ɸ/ corresponds to both /f/ and /k/ in other dialects. /ɸ/ appears, for the most part, before back vowels in Worodugukan, but there are instances of it before /e/ and /ɛ/. Examples with Maninka cognates are:[47]

Bambara	fini	Worodugukan	ɸɛ̃	"millet"
Maninka	ku	Worodugukan	ɸu	"yam"
Maninka	ko	Worodugukan	ɸo	"to wash"
Maninka	kɔ	Worodugukan	ɸɔ	"brook"
Maninka	kɔ	Worodugukan	ɸɔ	"back"
Bambara	fo	Worodugukan	ɸo	"to greet"
Bambara	fundeni	Worodugukan	ɸɔnɛ	"heat, steam"

Some exceptions to this development include:

Maninka	ko	Worodugukan	ko	"affair"
Maninka	kɛndɛ	Worodugukan	kɛnɛ	"healthy"

[46] My own investigations have uncovered this sound in both Koyaga and Maukan. Sometimes a morpheme which will have this sound in one variety will not have it in another, however.

[47] These examples may give the impression that Worodugukan /ɸ/ corresponds to /k/ in Maninka and /f/ in Bambara. It is possible that some of the Bambara forms may exist in Maninka. In any case, the impression given by the examples available is probably a matter of coincidence.

Maninka   fɔ   Worodugukan   fɔ   "to say"

A similar situation exists in the development of /š/ in Worodugukan from /s/ and /f/ in Maninka. Again the change appears sporadic - Maninka /so/, "horse", is /šo/ in Worodugukan; however, Maninka /so/, "town", is also /so/ in Worodugukan. Again, the Worodugukan phoneme corresponds to two phonemes in other Manding varieties. Examples include:

Maninka	sila	Worodugukan	šea	"road"
Maninka	so	Worodugukan	šo	"horse"
Maninka	sula	Worodugukan	šoa	"monkey"
Maninka	fere	Worodugukan	šile	"to sell"
Maninka	fɛ	Worodugukan	šɛ	"calabash"

Again there are forms which have not undergone this sound change:

Maninka	so	Worodugukan	so	"town"
Maninka	fɛ	Worodugukan	fɛ	"near"
Maninka	fili	Worodugukan	fii	"to err"

A final case where this same situation exists is the development of the affricate /č/ in Worodugukan. As before, it appears to be sporadic, and it corresponds both to Maninka /k/ and to Maninka /t/. Examples are:

Maninka	kela	Worodugukan	če	"message"
Maninka	ke	Worodugukan	čɛ	"man"
Maninka	tɛ	Worodugukan	če	"to break"
Maninka	tin	Worodugukan	či	"forehead"

Again there are exceptions. Among them are:

Maninka	tɛ	Worodugukan	tɛgɛ	"to cut"

Maninka ke Worodugukan kɛ "to make or do"

From alternate forms in Worodugukan and from cognates in other dialects, it is possible to hypothesize the following processes:

$$s \longrightarrow s^y \longrightarrow \check{s}$$
$$f \longrightarrow f^y \longrightarrow \check{s}$$
$$f \longrightarrow f^w \longrightarrow \phi$$
$$k \longrightarrow k^w \longrightarrow \phi$$
$$t \longrightarrow t^y \longrightarrow \check{c}$$
$$k \longrightarrow k^y \longrightarrow \check{c}$$

There also seems to be a tendency for palatalization to occur before front vowels and labialization before back vowels, although exceptions can be found in each case. But the problem is to determine why the change appears to be sporadic. It is possible that tone may play some part, but at present, not enough is known about the tonal system to pursue this line of inquiry. In any case, it is an area which requires further inquiry.

One final way in which the Worodugukan sound system differs from Bambara, Maninka, Commercial Dyula, and Gambian Mandinka, at least, is in the morphophonemic rules. Maninka, for example, does not have a rule deleting nasals at the phonemic and phonetic levels, nor does Maninka have a rule voicing stops and fricatives after a nasal. The consequence of this difference is that the Maninka forms are closer to their underlying forms:

Maninka	{n sen}	[n seŋ]	"my foot"
Worodugu-kan	{n sen}	[ze]	"my foot"

The morphophonemic rules of Worodugukan often create
ambituities which would not exist in Maninka: [48.]

Worodugu-kan	{n tɔgɔ}	[n dɔgɔ]	"my name"
	{n dɔgɔ}	[n dɔgɔ]	"my younger sibling"

The morphophonemic rule in Worodugukan which deletes
the third person singular pronoun as direct object also cre-
ates ambiguities that would not occur in Maninka:

Worodugu-kan	{a ye a san} [a ye sa]	"he bought it"
	{a ye sa} [a ye sa]	"he died"

Few of the historical changes undergone by Worodugukan
are unique to it. Maninka, Vai, Mau-kan, and perhaps others,
show CVCV reduction, although in none of these has a series
of new vowels been created. Palatalization and the appearance
of /č/ and /š/ have taken place in Bambara, and the morpho-
phonemic rule which voices consonants after a nasal is quite
common - the rule exists for Eastern Dyula, Manya, and Odienne
Maninka, at least.

In Worodugukan, however, the number of innovations and
the extent of the innovations are so great as to make Worodu-
gukan unintelligible to the speakers of more conservative vari-
eties, although the differences in underlying structure between

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48. These two would be distinguished tonally in Worodugukan.
The point is that in Maninka one would be [n tɔ] and the other
[n dɔ] , at the phonetic level.

Worodugukan and more conservative varieties is not as great as would appear at first glance.

K. <u>Tone</u>

The tonal system of Worodugukan appears to be very complex, and it is not, at present, completely understood. Tone has, until fairly recently, been neglected in the study of Manding dialects; Delafosse's pioneering works on Dyula are seriously marred by his statements that tone is not important in Dyula. Koelle's work on Vai and the missionary works on Kuranko also fail completely to discuss tone. Following Welmer's (1949) discussion of the tonemes of Maninka, it is only in the last ten years that detailed discussion of tonal systems have appeared for Maninka (Spears, 1965;1968;1972) and Bambara (Bird, 1966a;1966b;1968).

Nevertheless, certain facts about the Worodugukan tonal system can be stated with certainty, and certain points of comparison between the systems of Worodugukan, Maninka, and Bambara can be pointed out.

First, it should be noted that Worodugukan, like Bambara, Maninka, and other Mande and West African languages, is a terrace level language.[49] That is, it has four observable pitch intervals between succeeding syllables: 1) zero interval (no pitch change from one segment to another), 2) narrow ascending interval, 3) wide descending interval, and 4) narrow

[49.] Welmers (1959) first used this term.

descending interval.

Examples of the four intervals in Worodugukan are:

1) zero interval

$[\text{ì}^1 \to \text{bɔ}^1 \to \text{la}^1]$ "You left"

$[\text{a}^2 \to \text{ka}^2 \to \text{sa}^2]$ "He bought it"

2) narrow ascending interval:

$[\text{a}^2 \to \text{ye}^1 \text{sa}^3]$ "He bought it"

3) wide descending interval:

$[\text{a}^2 \text{če}^1 \to \text{la}^3]$ "He breaks it"

4) narrow descending interval:

$[\text{a}^2 \text{če}^4 \to \text{la}^2]$ "He sends him"

Tone in Worodugukan has both lexical and grammatical functions. It is lexically based, but it functions both to distinguish lexical items and to distinguish grammatical forms.

An example of how tone distinguishes lexical items can be seen in the following minimal pairs:

$[\text{ba}^1\text{ga}^1]$ "cooked rice"

$[\text{ba}^2\text{ga}^2]$ "poison"

$[\text{tama}^1{}^1]$ "franc"

$[\text{tama}^2{}^2]$ "lance"

Tone may also indicate grammatical relationships:

$[\text{a}^2\text{ye}^2\text{bɔ}^2]$ "He left"

$[\text{a}^2\text{ye}^1\text{bɔ}^3]$ "He removed it" [50]

50. Tone, here, indicates the presence of the third person singular direct object. Although deleted segmentally, the low tone of {à} lowers the verb.

$$\left[\text{mu\'so}^2 \text{lo}^2 \right]$$ "It's a woman"

$$\left[\text{mu\'so}^3 \text{lo}^3 \right]$$ "It's my wife"

Individual morphemes in Worodugukan may have an under-lying high tone or an underlying low tone. The tone belongs to the morpheme rather than to the syllable; given the base tone of the morpheme, rules can assign tones to all of the syllables of the morpheme.[51] Examples of noun contrasts have been given above. Examples of tonal contrasts between a high tone verb and a low tone verb are:

$$\left[\text{ɲ}^1 \text{ye}^1 \text{bɔ}^1 \right]$$ "I went"

$$\left[\text{ɲ}^1 \text{ye}^1 \text{na}^3 \right]$$ "I came"

$$\left[\text{aɲ}^1 \text{ye}^3 \text{déle}^3 \text{sa}^2 \right]$$ "We bought a bubu"

$$\left[\text{aɲ}^1 \text{ye}^3 \text{déle}^3 \text{je}^3 \right]$$ "We saw a bubu"

Although there are still many questions to be answered about the Worodugukan tone system - especially, the morphoton-emics of Worodugukan - there appear to be certain ways in which Worodugukan differs from both Maninka and Bambara, the two dialects for which tonal descriptions of any consequence exist.

Perhaps the most important of these is that, although Worodugukan nominals, like Bambara and Maninka nominals, have either an underlying high tone or an underlying low tone, in Worodugukan, each type is subdivided into one of two arbitrary classes, one of which takes the high tone specific determiner and one of which takes a low tone determiner.

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[51]. The actual surface tones of a nominal depend on many factors: the number of syllables, whether the noun is def-inite, whether the noun is in isolation, or the subject of the sentence, or a direct object; if the latter, what tense/aspect marker precedes the noun and what verb follows it. At present, not all of the shapes can be accounted for.

For example, $[lɔ́gɔ́]$, "wood", and $[lɔ́gɔ́]$, "market"
are, in isolation, completely homophonous high tone
nouns. When followed by another morpheme such as the
specific determiner, however, the two nouns influence in
different ways the morphemes that follow:

$[lɔ́gɔ́o^3]$ [52]	"the wood faggot"
$[lɔ́gɔ́o^{1-3}]$	"the market"
$[lɔ́gɔ́\ sa^3βa^3]$	"three wood faggots"
$[lɔ́gɔ́\ sa^1βa^3]$	"three markets"

The same arbitrary class framework appears to be
applicable to low tone nouns, although it is obvious that
in many contexts, morphotonemic rules render the surface
tonal representation different enough from the probable
underlying representation that it is more difficult to see
this relationship. [53] Observe, however, the following pair:

$[ɲ^1ya^1nisi^3\ sa^3]$	"I will buy a cow"
$[ɲ^1ya^1dele^2\ sa^4]$	"I will buy a bubu"

In the lexicon, therefore, nouns will be given in
the definite form; the underlying tone will be given and

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[52] The high tone determiner is high falling, finally. Not
all final highs are high-falling, however.

[53] A form which I am considering to have as an underlying
form nisió will be $[nisio^2]$ in isolation. The role of tonal
dissimilation that Spears states for Maninka would account for
the lowering of a high tone. It can be stated with certainty
that the determiner of nisi is high in some contexts, whereas
the determiner of dele is never high. Rules of dissimilation
are not stated here; a full statement of such rules requires
further investigation, and would merit, probably, a separate
treatment of considerable length.

written over the first syllable of the noun. The tone of
the determiner will indicate class membership.

It is in this respect that Worodugukan differs signifi-
cantly from the other Manding dialects for which tonal descrip-
tions exist. In Maninka and Bambara, the specific determiner
is always a low tone (it has no segmental representation in
either Bambara or Maninka; but this is probably independent of
the fact that the determiner has the same tone for all nomi-
nals).

It should be remembered, however, that, although the tone
of the specific determiner can indicate class membership, nom-
inals of different tone classes differ tonally even when in
the indefinite form:

$$\left[\text{l}\grave{\jmath}\overset{1}{g}\jmath^{1}\text{y}\varepsilon^{3}\text{y}\grave{a}^{3}\right]$$ "A wood faggot is here"

$$\left[\text{l}\grave{\jmath}\overset{1}{g}\jmath^{1}\text{y}\varepsilon^{1}\text{y}\grave{a}^{1}\right]$$ "A market is here"

There are two other morphotonemic processes at work in
Worodugukan which set it off from other dialects. First, in
Worodugukan, the syllable after the first and second person
singular pronouns is always high:

$$\left\{\acute{\text{n}}\ \text{k}\grave{\jmath}\text{-č}\varepsilon\acute{\text{o}}\right\}$$ $$\left[\text{ŋ}\overset{1}{g}\jmath^{1}\text{-č}\varepsilon\text{o}^{3}\right]$$ "my older brother"

$$\left(\text{cf.}\left\{\acute{\text{n}}\ \text{d}\grave{\jmath}\text{g}\grave{\jmath}\text{-č}\varepsilon\acute{\text{o}}\right\}\left[\text{nd}\grave{\jmath}\text{g}\grave{\jmath}^{1}\text{-č}\varepsilon\text{o}^{1}\right]\right.$$ "my younger brother"

The process which raises the first syllable of k_-c_
also accounts for the distinction between:

$$\left\{\acute{\text{n}}\ \text{mùso}\right\}$$ $$\left[\text{mùso}^{3}\right]$$ "my wife"

$$\left\{\text{mùso}\right\}$$ $$\left[\text{mùso}^{2}\right]$$ "woman"

There is a second process at work in Worodugukan which raises low tones to high tones. The scope of this process has not been accurately determinerd, but it is clear that a series of one or more highs followed by one or more lows can become a series of lows followed by a series of highs. For example, both of the following appear in the corpus:

$$[\text{ɲ}^1\text{ye}^1\text{lii}^1\text{sa}^{3}]^{54.} \qquad \text{"I bought the honey"}$$

$$[\text{ɲ}^2\text{ye}^2\text{lii}^2\text{sa}^1] \qquad \text{also "I bought the honey"}$$

In this case, a series of highs followed by a low appears to be in free variation with a series of lows followed by a high. In other cases, the variation appears in the same paradigm:(underlining will indicate the tones which reverse):

$$[\text{ɲ}^1\text{ya}^1\text{sa}^3] \qquad \text{"I will buy it"}$$

$$[\text{a}^2\text{ya}^2\text{sa}^1] \qquad \text{"He will buy it"}$$

$$[\text{šo}^1\text{yɛ}^3\text{ya}^3] \qquad \text{"A horse is here"}$$

$$[\text{šo-lu}^3\text{yɛ}^3\text{ya}^2] \qquad \text{"The horses are here"}$$

$$[\text{ɲ}^1\text{ya}^1\text{nišii}^3\text{je}^9] \qquad \text{"I will see the cow"}$$

$$[\text{a}^2\text{ya}^2\text{nišii}^3\text{je}^3] \qquad \text{"He will see the cow"}$$

In each case, the underlined sequence is high-low in the first instance and low-high in the second.

This process accounts for the raising of low tone verbs:

$$[\text{ɲ}^2\text{ye}^1\text{nišii}^3\text{sa}^2] \qquad \text{"I saw the cow"}$$

$$\text{cf.}[\text{ɲ}^1\text{ye}^1\text{niši}^3\text{sa}^3] \qquad \text{"I saw a cow"}$$

The present investigation has not undovered the limits under which this process operates. It is clear that not all

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54. li has a high underlying form and takes a high tone determiner (cf. $[\text{ɲ}^1\text{ye lii}^1\text{je}^1]$, "I saw the honey").

high-low sequences become low-high, but it is clear that many do and that this process is one of the major ways in which the tonal system of Worodugukan differs from that of other Manding dialects. [55] The tonal system of Worodugu-kan is, like the segmental system, innovative. The inno-vations in phonology and tone may mask the fact that the morphology and syntax of Worodugukan are quite similar to the morphology and syntax of other Manding dialects.

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[55] There is a rule of verb raising for Bambara (Bird, 1966a), but the Bambara rule applies only to verbs, and it is not the equivalent of the Worodugukan rule which raises low tones.

III. MORPHOLOGY AND SYNTAX

In this section, certain aspects of morphology and syntax will be dealt with. There will be three sub-parts to this section: morphology, sentence patterns, and the tense/aspect system. In each of the three parts, the Worodugukan data will be explicated and then compared to corresponding data in the other Manding dialects for which data is available.

Worodugukan presents few new insights into Manding morphosyntax. [1] Although deletions of segments and alteration of segments by morphosyntactic rules often tend to mask underlying representation and obscures the relationship between Worodugukan patterns and those of other Manding dialects, the differences between Worodugukan and the other dialects are relatively insignificant.

The section on morphology and syntax will be divided into three parts - morphology, specifically, the structure of the noun phrase and the structure of the verb phrase, sentence patterns, and finally, the tense/aspect system.

The discussion of the morphology of the noun phrase and of the verb phrase will precede the examination of major sentence patterns, as these terms are used in the discussion of sentence patterns. Most of the sentence patterns consist of a noun phrase, a tense/aspect marker, and a predicate phrase -

[1] "Morphosyntax" will be considered synonymous with morphology and syntax.

48.

either a verb phrase or a locative phrase.

The tense/aspect system of Worodugukan is interesting in comparison to those of other Manding dialects. As in all Manding dialects, tense and aspect are indicated in Worodugukan by a morpheme or series of morphemes which, with one exception, are placed between the noun phrase subject and the predicate phrase of a sentence. The aspectual system in Worodugukan is interesting in that it appears to contain some aspectal distinctions not found in all of the other dialects. Also, a comparison of the various dialects gives some basis for speculation about a possible proto-Manding tense/aspect system. For these reasons, a section on the tense/aspect system has been included at the end of this section.

A. Morphology of the Noun Phrase

The morphology of the noun phrase will be discussed first. It appears that all of the complexity in Manding morpho-syntax adheres in the structure of the noun phrase while, on the other hand, there are basically only two types of verb phrase - transitive and intransitive.

A noun phrase will here be considered any phrase which can go before a tense/aspect marker in a sentence or between a tense/aspect marker and a verb. These two noun phrase "slots", one corresponding to the subject of a sentence and the other to the direct object of a verb, are two of the "slots" filled by a noun phrase. The object of a postposition is also a noun phrase. [2]

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[2] Postpositions, which indicate location and other

1. The Definite Marker

Noun phrases may be either definite or indefinite. The definite form is indicated by a suffix, two allomorphs of which are /o/ and /ɔ́/. [3] The definite suffix is always the last morpheme in a noun phrase.

It is difficult to translate the meaning of the Worodugukan definite suffix into a European language; although, for instance, English has a distinction between the two determiners "the" and "a", the Worodugukan definite and indefinite forms are not their equivalents.

In Worodugukan, most noun phrases take the definite suffix, including those that would require a translation with "a" in English. The indefinite form of a noun phrase, when it appears, means "a" or "some". Muso yɛ yan can be translated as "There is a woman" or "There are some women here".

The indefinite form leaves number unspecified. The definite form of a noun, the noun with the specific determiner, can be translated into English sometimes as "the" and sometimes as "a". In either case, it refers to a particular one of whatever the noun phrase happens to be.

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grammatical relationships, follow a noun phrase in a postpositional phrase, e.g., musa fɛ "near Moussa". For a discussion of locative post-positions in Manding dialects, cf. Spears (1972b).

[3.] /ɔ́/ represents a final underlying n of the noun plus the definite suffix o. Dialectal variants of /ɔ́/ are /ŋgo/ and /ŋɔ/. As has been stated in the section on tone, tone also indicates definiteness, and often when tone indicates the definiteness of a noun, the vowel o is assimilated to the final vowel of the nominal, e.g., nisiɔ san /nisii sa/.

Of the Manding dialects under consideration, Kuranko,
Vai, and Gambian Mandinka have definite markers which have
segmental representation. In Bambara, Maninka, and possibly
other dialects such as Eastern Dyula, the definite-indefinite
contrast is indicated solely by tone. These will be discussed
in the comparative section.

Noun phrases in Worodugukan are either singular or
plural. Again, the distinction is one which exists in English,
but nouns that might be marked for plural in English might
not be so in Worodugukan. In Worodugukan, the plural is indi-
cated by the suffix -lu or the particle of focus le plus lu,
but these additional morphemes are used only when no other
morpheme, such as a numeral or an adjective such as šaman,
indicates the plurality of the nominal. Thus, *šo-lu saba,
with the meaning "three horses" is ungrammatical.

2. Types of Noun Phrase Constructions

The simplest type of noun phrase in Worodugukan is the
single noun without adjectives or derivational or inflection-
al suffixes. An informant may give a noun with the definite
marker as a citation form, but more often, he will give a
noun without any suffix. A noun phrase without a definite
marker can also be found in a sentece:

muso ye yan   "There is a woman – or – some
                      women here".

However, noun phrases with only one nominal deserve to
be distinguished from other, more complex, types of nominal
constructions. Therefore, for the purpose of this study, a

simple noun phrase will be defined as a single nominal with
or without derivational suffixes such as the definite marker
and the plural marker.[4.]

More complex nominal constructions fall into two main
groups - genetival constructions and compounds. Genetival
constructions are of two types - alienable and inalienable.
The distinction between those nouns which can participate
in a construction signifying inalienable possession and
those which cannot is found throughout the Mande language
family. Although the list of nouns may differ from variety
to variety, in general, nouns which are capable of being
inalienably possessed are those denoting parts of the body
and kinship relations.

In Worodugukan, alienable possession is indicated by
the construction NP + genetival particle + NP, the first
noun phrase being the possessor and the second noun phrase
the possessed. Examples are:[5.]

    <u>n ya wüo</u>   "my dog"

    <u>n ta nisio</u>   "my cow"

There is a slight difference between the two genetival
particles, <u>ya</u> and <u>ta</u>, in meaning; <u>ya</u> implies that all of the

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[4.] More research is necessary to determine whether plural
nominals are definite or indefinite or whether there is a
possible contrast.

[5.] Worodugukan data will be in morphophonemic transcription;
all other data will be in the original transcription of the
original source, except that open and closed vowels will be
indicated when this information is known.

things in question belong to the possessor; <u>ta</u> implies that the things possessed are some out of a number. <u>N ta nisi</u> means, "Among those cows, give me those which are mine". <u>Ta</u> by itself means "part" or "share".

Inalienable possession is indicated by the absence of a genetival particle:

<u>n fao</u>	"my father"
<u>n bö</u>	"my hand"
<u>v̌soo tigio</u>	"the horse's owner"
<u>kɔkɔtio gböo</u>	"the pig's skin"

A given noun may be capable of being possessed alienably and inalienably, there being a difference in meaning between the two constructions:

<u>n gböo</u>	"my skin" (my own skin)
<u>n ya gböo</u>	"my skin" (the skin that I acquired)

All of the above examples have been examples with the definite marker. In the data, examples are also found without the definite marker, and the nature of the meaning difference, if any, is not known.[6]

The noun phrase of possession is a noun phrase which includes at least two simple noun phrases. It is possible, however, to have a possessive phrase which includes more noun

[6] One informant suggested that the form with the definite marker was more emphatic. One possibility can be ruled out. In Maninka, according to Spears (1972), the definite marker generally does not go on names of kin when gender is specified. In Worodugukan this does occur (e.g. ɲɓɛma-čɛ fa-čɛ o, "my grandfather's father"). The definite marker can also go on body parts (e.g., <u>n dao</u>, "my mouth").

phrases:

> n kwŏ-čɛ muso kwŏ-o   "my older brother's wife's
>   older brother"

The possessive phrase of inalienable possession con-
trasts with the phrase of alienable possession. It also con-
trasts with the compound noun phrase:[7]

> šoo tigio   "the owner of the horse"
>
> šo-tigio   " the horse owner"
>
> kɔkɔtio gbóo   "the skin of the pig"
>
> kɔkɔti-gbóo   "the pig-skin"

The compound noun phrase is a single unit with a single
tone pattern and only one definite marker, although the com-
pound may be built up of many units, e.g:

> sie-kan-La-se-lao   "prayer leader"
>   (pray-voice-on-reach-agent)

It will be considered here that there are three basic
types of two-unit compounds and that more complex compounds
are built up from them using compounds as units in still
larger two-unit compounds. After the three basic two-unit
compounds have been adumbrated, some of the longer compounds
will be analyzed in terms of immediate constituents.

In all three of the basic types, the second element is
a noun. In the most common type of compound, however, both
elements are nouns. Although there are no limits as to which
nouns can be the second element in a noun-noun compound, cer-
tain nouns are often the second element of compounds even

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7. For tonal contrasts between the genetival phrase and the
compound, see section on tone.

though they can also occur by themselves. Two of these are
čɛ and muso, which specify the gender of the first element
of the compound.

kwɔ̈—muso	"older sister"
jɔn-čɛ	"male slave"
sisɛ-muso	"hen"
bɛma-čɛ [8]	"grandfather"

The morpheme den by itself means "child" or "offspring"
and can be used as the second element of a compound with that
meaning:

sisɛ-den	"chick" (chicken-child)
nisi-den	"calf" (cow-child)

It can also be used in ways which, to the speaker of
English, at least, seem quite idiomatic:

lɛkoli-den	"student" (school-child)
nyɛ-den	"tongue" (tongue-child)

One other morpheme which is often the second element of
a compound is tigi, "owner" or "master". This word rarely
occurs in isolation; however, informants have no trouble
saying it in isolation. Examples are:

so-tigi	"horse owner"
dugu-tigi	"village chief"
kabla-tigi	"head of the clan"
hakii-tigi	"smart man" (intelligence-master)

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[8] In certain kinship terms, the gender is specified, even
though such information is clearly redundant; *bɛma-muso
is impossible.

There are certain other elements which can be found with some regularity as second elements of a compound. Among these are mɔgɔ, "person", mugu, "powder", ǰe, "water", sun, "plant", and ǰea, "place". Other compounds are more idiomatic - the meanings are less evidently the sum of the parts, or at least, the meaning of the compound would be less predictable to a speaker of English. Examples are:

kɔgɔ-ǰe	"the sea" (salt-water)
koma-kan	"voice" (word-throat)
nɛgɛ-šo	"bicycle" (iron-horse)
bon-kő	"wall" (house-bone)

A second type of noun phrase has as its first element a locative phrase. Examples of this type of noun phrase are:

kɔrɔ-ma-koma	"secret talk" (inside-on word)
da-kɔ̈-še	"beard" (mouth-under-hair)
da-kɔ̈-sigi	"assistant" (door-under-sitter)
dugu-ma-fɔ̃	"snake" (on-ground-thing)

A third type of compound has as its first element a verb phrase:

la-fɔ̃	"bed" (lying thing)
ǰiese-tɛnɛ-fɔ̃	"loom" (thread weaving thing)
bin-kɛ-ǰea	"hunting ground" (grass-doing place)
kiti-kɛ-ǰea	"court" (judgment-doing place)

As has been illustrated, the second element of a noun phrase can be a noun, the meaning of which is clear because it appears as a free form. There are morphemes which can be

considered to be nouns, but which occur only as the second
element of compounds. Two such morphemes are <u>baga</u> (also, <u>baga-</u>
<u>tɔ</u>)and <u>bea</u>. Examples are:

<u>ko-lon-baga</u>	"wise" (thing-knowing-agent)
<u>šea-baga-tɔ</u>	"person afraid" (fear-agent)
<u>fii-bea</u>	"person who doesn't err" (error-agent without)
<u>mɔgɔ-kwɛsi-bea</u>	"person who doesn't pay atten- tion" (person-pay attention- agent without)

The second element in a compound may also be a deriva-
tional morpheme. These can be considered syntactically to be
nouns; however, they are bound forms and have no independent
meaning. The chief derivational morphemes are -<u>la</u>, which sig-
nifies the doer of an action, and <u>ya</u>, which makes verbs and
adjectives into nouns. <u>Ya</u> can also be added to nouns (e.g.,
<u>joa</u>, "trade"). Examples of <u>ya</u> and <u>la</u> are:

<u>dɔn-kɛ-la</u>	"dancer" (dance-do-er)
<u>kiti-tɛgɛ-la</u>	"judge" (judgment-cut-er)
<u>joa-ya-kɛ-la</u>	"trader" (trade-ness do-er)
<u>mako-ya</u>	"need" (need-ness)
<u>kea-la</u>	"needle" (sew-er)
<u>kɛnɛ-ya</u>	"light" (light-ness)
<u>se-ya</u>	"power" (doing-ness)
<u>jiese-tene-ya</u>	"weaving" (thread weave-ness)

Two morphemes which can be discussed under the rubric of
derivational morphemes are <u>nin</u> and <u>tɔ</u>. These two morphemes
can be added to verbs and have the effect of nominalizing

them. The morpheme <u>Li</u> is similar (<u>sɛbɛ</u>, "to write"; <u>sɛbɛ-Lio</u>, "writing"), but as this morpheme usually nominalizes verbs only before <u>kɛ</u>, "to make or do", it will be discussed in terms of the verb phrase. Examples are:

<u>a na-tɔ Lo</u>   "He just came." (it's his coming)

<u>n sɛgɛ-nin Lo</u>   "I am tired." (it's my tiredness)

Three types of noun phrase constructions have been presented: simple, genitival, or possessive - both alienable and inalienable and, finally, compounds. A noun phrase may also be composed of a constituent noun phrase plus an adjective.

3. Some Adjectives and Quantifiers

Between a noun phrase and its definite marker can go adjectives and quantifiers. When a noun phrase ends in a descriptive adjective, the adjective follows the noun and the definite marker follows the adjective immediately:

<u>fea-fino</u>   "the African" (body black the)

<u>lomù-bao</u>   "the orange" (citrus big the)

The meaning of the noun and adjective can be merely additive:

<u>bon-ba</u>   "big house"

<u>šo-ján</u>   "tall horse"

In some other cases, the adjective is part of the lexical item. This is especially true for the adjectives <u>ba</u>, "big" and <u>nin</u>, "little":

<u>jii-mɔgɔ-nin</u>   "statuette" (wood person-little)

<u>den-nin</u>   "child" (child-little)

<u>lomù-ba</u>   "orange" (citrus-big)

<u>ba-k"ɔ-nin</u>   "billy goat" (goat-old-little)

There is also a set of quantifiers which, if they occur,
go after descriptive adjectives. These do not occur with the
definite marker. Among these are numbers and morphemes such
as:

<u>gbɛ</u>	"other"
<u>si</u>	"no"
<u>dɔ</u>	"some"
<u>sɛba</u>	"many"
<u>men</u>	"this" or "that" [9.]
<u>bɛ</u>	"all"

The plural marker when it appears is the final morpheme
in a noun phrase:

<u>sŏ-fyɛ-nin-dɔ-lu</u> [10.]   "donkeys" (horse(?)-little-
                                      some-plural)

Thus far, three basic types of compounds have been
presented: noun-noun, verb phrase-noun, and postpositional
phrase-noun. These basic types, like simple noun phrases,
can be followed by adjectives and quantifiers. Larger noun
phrases, however, can be analyzed in terms of these basic
types; the basic types are the constituents of larger units,

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9. In many Manding dialects there is a "near" demonstrative
and a "far" demonstrative, roughly equivalent to "this" and
"that". I was not able to elicit such a contrast in Worodugu-
kan, although I did try to do so.

10. <u>Fyɛ-nin</u> and <u>bo-ba</u>, "small" and "big", respectively, appear
in kinship terms and a few other words. The first parts of
each do not occur elsewhere; they are broken up here into two
morphemes only because <u>nin</u> and <u>ba</u> are recurrent partials with
morphemic status.

and, in fact, noun phrases could be built up indefinitely by a recursive process.

A couple of examples of longer noun phrases will be taken to illustrate that they can be analyzed in terms of the basic types presented above. An example of a longer noun phrase is:

sie-kan-La-se-la   "prayer leader" (pray-voice-
                                        make-raise-er)

Superficially, this has the structure: Verb + Noun + Postposition + Verb + Noun. Very few noun phrases can be found with exactly this structure. Nevertheless, this noun phrase is a simple verb phrase-noun construction, when analyzed into its constituents:[11]

sie	kan	La	se	la
"to pray"	"voice"	"on"	"to reach"	"doer"
V	N	PP	V	N

"praying voice"
NP

"to cause the praying voice to"
PP Phrase

"to cause the praying voice to go up"
Verb Phrase

"someone who makes the praying voice go up"
Noun Phrase

---

[11] The structure of the verb phrase will be discussed below.

A second example is donso-ya-kɛ-la, "hunter":

donso "hunter" N	ya "-ness" N	kɛ "do" V	la "doer" N
"hunting" NP			
"to hunt" VP			
"a do-er of hunting" Noun Phrase			

A final example is: ɖo-Li-kɛ-bea, "one who doesn't greet people properly".

ɖo "to greet" V	Li "-ing" N	kɛ "to do" V	bea "someone who lacks..." N
"greeting" NP			
"to make greetings" Verb Phrase			
"someone who doesn't greet" Noun Phrase			

Thus, more complex compounds are built up from smaller units, and at every level of constituent analysis, they can

be analyzed in terms of the three basic types of noun phrases enumerated above.[12]

4. Comparison of Noun Phrase Types

The structure of the noun phrase in Worodugukan shows no differences from the structure of the noun phrase in other Manding dialects. Although comprehensive proof of this is beyond the scope of this discussion, the basic similarities can be shown.

The contrast between definite and indefinite noun phrases exists in all of the dialects under discussion with the probable exception of Commercial Dyula. My own field work in Commercial Dyula suggests that all nouns are in the definite form tonally but that speakers of Commercial Dyula who are not speakers of a second Manding dialect neither produce nor recognize a contrasting indefinite form.

In Gambian Mandinka, Kuranko, and Vai, the contrast between definite and indefinite is sometimes indicated by a change of the final vowel in the definite form. Unlike Worodugukan, the change is suppletive rather than there being a vowel added:

Gambian Mandinka: <u>yiri</u>   "tree"

                            <u>yiro</u>   "the tree"

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[12] It may be argued that it is circular to say that the second element of compounds are always nouns and then to assert that derivational morphemes are nouns because they are the second elements of compounds. It would be possible to set up a fourth basic type - NP derivational morpheme - and a fifth type - VP derivational morpheme. This seems unnecessary, as it requires duplication in the description of the first element.

Kuranko	musu	"woman"
	muse	"the woman"
13.		
Vai	bolo	"hand"
	bolo	"the hand"

Gambian Mandinka is the only Manding dialect among those investigated which has [o] as the vowel indicating the definite form. As in some dialects of Worodugukan, the form after a nasal is [-go] . Like Vai, Kuranko, and the Northern Mande language, Susu, the Southwestern Mande languages have a front high vowel as the definite marker; for Susu and the Southwestern Mande languages, the vowel is [i] .

Until fairly recently, the definite/indefinite contrast was not known to exist in the Manding dialects, with the exception of Gambian Maninka (Rowlands, p. 150).

Bird (1964,1966b) called attention, however, to the existence of a definite/indefinite contrast in Bambara which is manifested tonally.

> Bambara has a syntactic class of determiners which under certain conditions are representable by a low tone which brings about a step-down in pitch pattern (Bird, 1966a, p.11).

Spears (1968) has found that Maninka also has a determiner that is representable by an underlying low toneme.

In Bambara, there is a contrast between:

| muso be yan | "a woman is here" |
| muso be yan | "the woman is there" |

In Maninka there is a contrast between:[14]

| muso te yan | "there is no woman here" |
| muso te yan | "the woman is not here" |

These contrasts are equivalent to the contrast in Worodugukan between:

| muso yɛ yan | "a woman is here" |
| musoo yɛ yan | "the woman is here" |

In Worodugukan, there is a tonal contrast, but there is also an additional segment in the definite form.

The contrast between alienable and inalienable possession exists throughout the Manding dialects. In all cases, the particle has the vowel [a] but the form of the particle differs. The particle of alienable possession in the various dialects is:

Maninka:	la
Bambara:	ka
E. Dyula:	ta
C. Dyula:	ta
Vai:	a
Kuranko:	a
Mandinka:	la
Worodugukan:	ya and ta

In the case of compounds, also, Worodugukan is quite conservative, and all of the basic types of compounds appear in

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14. According to Spears (1968), this contrast cannot be elicited in the affirmative, except in sentences which include relative clauses.

the other Manding dialects. Examples of each type are:

A. Noun-Noun

Maninka:

nya-yi (eye-water) "tears"

bon-ti (house-master) "house owner"

Bambara:

nɔnɔ-tigi (milk-master) "milk seller"

nɛgɛ-sira (iron-road) "railroad"

Eastern Dyula:

baranda-yiri "banana tree"

ba-kye (goat-male) "billy goat"

Kuranko:

Karan-bon (learning-house) "school house"

kinogo-tume "sleep time"

Vai: fa-kume "death news"

dem-musuma (child-female) "girl"

Mandinka:

jata-kuloo "lion skin"

sita-juo "baobab tree"

Commercial Dyula:

fa-cɛ (father-male) "father"

bo-da (posterior-hole) "anus"

B. Postpositional Phrase-Noun

Maninka:

biro-la-mɔ (in the office person) "office worker"

wa-rɔ sila (in the forest road) "forest road"

Bambara:

> dugu-ma-fen   (on the ground thing)   "snake"
>
> kun-na-fèn   (on the head thing)   "folly"

Kuranko:

> bon-buro-fennu   (house possessed things) "furniture"
>
> kunto-karan   (in the head learning)   "memorization"

Mandinka:

> ̌jii-kono-mootoo (in the water motor)   "motorboat)

C. Verb Phrase-Noun

Maninka:

> kasi-la   "one who cries"
>
> mudu-bɔ-tuma   "tax paying time"

Bambara:

> si-yɔrɔ   (live-place) "bedroom"
>
> sɛnɛ-kɛla   (field do-er)"farmer"

Eastern Dyula:

> fila-ke-barha   "doctor"

Commercial Dyula:

> la-fen   (lie thing)   "pillow"

Kuranko:

> sigi-fen   (sitting   "chair"
>   thing)

Vai:

> sin-ke-moba   (sing do   "great singer"
>   person)

Mandinka:

    tabiri-bungo   (cooking house)   "kitchen"

    maani-kati-waatoo   "rice cutting time"

As in Worodugukan, in the other Manding dialects one can put an adjective or more than one adjective in between the noun phrase and the determiner (when the determiner is tonal only, the adjective still can be said to be before the determiner). Examples are: [15]

Maninka:

    kɛ-ba   "big man"

    san-tolo-ba-   (sky-ear- "rabbit"
        nin   big-little)

Bambara:

    nɔnɔ-kumu   "sour milk"

    so-ba   "large horse"

Mandinka:

    jii kandoo   (water hot)"hot water"

    fata fingo   (body black) "African"

Kuranko:

    mogo yan   "tall person"

    sui we   "big town"

Eastern Dyula:

    morho gbe-ru   (persons   "Europeans"
                 white)

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[15] Where glosses are not given in parentheses, the translation is morpheme for morpheme, although in the Manding example, the adjective follows the noun.

[16] In this example, nin, "little", and ba.., "big", occur together. I have no examples of this in Worodugukan.

<u>so-ba</u>   "big town"

Vai:

<u>mandsa banu</u>   "great chiefs"

The three basic types of noun phrase are common to all

of the Manding dialects under discussion. In fact, there are

no differences in the structure of the noun phrase from dia-

lect to dialect, with the possible exception of the lack of

a definite/indefinite contrast in Commercial Dyula.[17]

B. <u>The Verb Phrase</u>

The structure of the verb phrase in Worodugukan is iden-

tical to the structure of the verb phrase in other Manding

dialects. Verb phrases are of two types: transitive and in-

transitive. In a transitive verb phrase, the direct object

precedes the verb. Examples of transitive verb phrases are

<u>a bɔ</u>, "it remove" and <u>kean-Li-kɛ</u>, "teaching do" in the fol-

lowing sentences:

<u>n ye a bɔ</u>   "I took it out"

<u>n ye kean-Li kɛ</u>   "I taught"

Examples of intransitive sentences are: <u>bɔ</u>, "to leave", and

<u>taga</u>, "go", in:[18]

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[17] I deliberately tried to elicit the contrast in Commercial
Dyula and was able to do so only with one informant who also
spoke Bambara well. As no tonal analysis has been done of
Eastern Dyula, there is no way of knowing whether the defi-
nite/indefinite contrast exists. It probably does.

[18] This is the one construction in which the tense/aspect
marker follows the verb phrase. It will be discussed in the
section on sentence patterns and in the section on tense/
aspect markers.

<u>n ye bɔ</u>   "I went out"

<u>a taga La</u>   "He left"

A postpositional phrase may be part of the verb phrase.
Some postpositional complements are placed before the verb
and some after; this is a lexical rather than a grammatical
matter.

A verb may have a postpositional phrase as a complement.
The choice of such a post-positional phrase is governed by
the verb and does not express static location. Whether the
verb may or must take a given postposition, and what the post-
positional phrase and verb mean together, must be indicated
in the lexicon. With the exception of the causative, which
will be discussed below, the meanings of the verb and post-
positional phrase together are not predictable.

Postpositional complements may come before or after the
verb. A number of the postpositions can form postpositional
phrase complements after the verb.[19] Examples are:

<u>a di m ma</u>   "give it to me"
                                (it give me on)

<u>an ye bɛ kiɛ ma</u>   "we agreed on war"
                                (we past agree war on)

<u>a ye bea n Lɔ</u>   "he surprised me"
                                (he past stop me in)

<u>i ye sɔn min La</u>   "what did you accept?"
                                (you past accept what on)

[19.] Bird (1966b) points out that in a transformational grammar
verb + complement must have a different structure than when
the postpositional phrase is a genuine locative.

In pre-verbal postpositional phrases, only La, Lɔ, and ma occur in the data. This corresponds with what Spears has found for Maninka (1972b). Examples of postpositional phrase complements which go before the verb are:

taga a Lɔ bɛ	"welcome him" (go him in meet)
i ye n La sɛgɛ	"you bothered me" (you past me on tire)
i ya kan ka mɔgɔ-šama ma nyina	"you must ask may people" (you must people many on search)

The causitive is formed with a pre-verbal complement with La. This construction is regular and can be formed with almost any verb:

a ye n La sigi	"he seated me" (he past on me sit)
n ye musoo La domuni	"I fed the woman" (I past woman the on eat)

Postpositional complements translate into English in various ways. The postpositions ma and ye often indicate indirect objects:

a di n ma	"give it to me" (it give me on)
a fo n ye	"greet him for me" (him greet me for)

They may translate into English as direct objects:

a ye den La mɔ	"he raised the child" (he past child on raise)

One type of transitive verb phrase deserves special attention: the verb phrase made up of a verb, the morpheme Li; a morpheme which nominalizes certain verbs; and the verb

kɛ, "to make or do". [20.] Examples are:

<u>n ye tabi kɛ</u>	"I cooked"
	(I past cooking do)
<u>n ya sɛbɛ-Li kɛ</u>	"I will teach"
	(I future writing do)

This construction occurs in all of the dialects under discussion with the possible exception of Vai. Although it is transitive in form, it is intransitive in meaning. In Worodugukan, and in other dialects also, it would not be possible to form an intransitive with some transitive verbs by simply deleting the direct object; <u>a ye tabi</u>, NP tense/ aspect marker + Verb, would mean, "It was cooked" rather than, "He cooked". Thus, the intransitive must be formed by nominalizing the verb and then making the resulting noun phrase the direct object of the verb <u>kɛ</u>.

Examples will be given for all three types of verb phrases discussed above: simple intransitive, simple transitive, and transitive with <u>Li</u>. It will be seen that in the morphology of the verb phrase, also, Worodugukan is quite conservative.

Maninka:

<u>fa</u>	"to die"
<u>nisi fa</u>	"to kill cows"
<u>sɛbɛ-li-kɛ</u>	"to write"

[20.] There are at least two good reasons for considering <u>Li</u> to be a morpheme which nominalizes verbs. One of these is that the specific determiner can go after a verb + Li, e.g., <u>sɛbɛ-Lio</u>. Secondly, the verb <u>kɛ</u> takes a noun phrase direct object, e.g., <u>n ye fũo kɛ</u>, "I did marriage do".

Bambara:

b**ɔ**	"to leave"
ny**ɔ** san	"to buy grain"
tobili-k**ɛ**	"to be cooking"

Eastern Dyula:

tarha	"to go"
kardasi sa	"to buy paper"
domu-ni-ke	"to eat"

Gambian Mandinka:

taa	"to go"
too long	"to know a name"
tabiroo	"cooking"

Kuranko [21]:

ta	"to go"
wo lon	"to know that"

Vai:

ta	"to go"
torowa	"to experience trouble"

The structure of the verb phrase in Worodugukan is also identical to corresponding constructions in other Manding dialects. Occasionally this is not immediately evident. For example, the third person singular direct object is deleted by morphophonemic rules, and it appears that Worodugukan has a different structure for sentences with transitive verbs and

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[21] The equivalent of Li may exist in Kuranko and Vai; however, no examples were found in the available data.

a third person singular direct object. Such differences are, however, a matter of phonology and for reasons independent of one's knowledge of other dialects, it is generally necessary to posit an underlying structure for Worodugukan that is quite similar to structures closer to, or identical with, surface structures in other varieties. Additional morphophonemic rules and morphotonemic rules often obscure the basic structure of Worodugukan phrases and sentences.

Because the morphology of Worodugukan noun phrases and Worodugukan verb phrases is similar to that of other Manding dialects, it is to be expected that the syntax of the various dialects will also show great similarity. This is, in fact, true.

C. Sentence Patterns of Worodugukan

The inventory of simple sentence patterns in Worodugukan is identical to those of other Manding dialects, and structural differences between Worodugukan and other dialects within a given pattern are few. In this section, the simple sentence patterns of Worodugukan will be discussed, and then comparisons will be made between the structures of the Worodugukan patterns and those of other Manding dialects.

The eight patterns for Worodugukan are summarized in the table below. The names given to the patterns are not commonly used; however, because equivalents for the patterns exist in all of the dialects under discussion, the names are useful for purposes of comparing the various dialects. The patterns

22.
are:

	Affirmative	Negative
I. Sentence of Identification	NP + Lo	NP + tɛ
II. Existential Sentence	NP + NP + Le + Le	NP + tɛ+ NP + Le + Le
III. Imperative	VP	i + ka + VP
IV. Locative Sentence	NP + yɛ + Locative	NP + tɛ+ Locative
V. Common Sentence	NP + T/A + VP	NP + T/A + VP (Neg.)
VI. Durative Sentence	NP + yɛ+ VP + La	NP + tɛ+ VP + La
VII. Intransitive Sentence	NP + V + La	NP + ma + V
VIII. Adjective Sentence	NP + a + Adjective	NP + man + Adjective

The first pattern to be dealt with here can be called
the sentence of identification. In Worodugukan, the sentence
of identification consists of a noun phrase followed by the
morpheme Lo or, for the negative, tɛ.

muso Lo   "It's a woman"

muso tɛ   "It's not a woman"

As is common in other Manding dialects, tɛ, the morpheme
for negative sentences of identification, is also the nega-
tive copula. Lo, however, is a form peculiar to this construc-
tion in Worodugukan. This is the case for the sentence of iden-
tification in some other dialects; however, in some Manding
dialects, the emphatic particle or a tense/aspect marker is

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22. The abbreviations NP and VP stand for noun phrase and
verb phrase, respectively. In the common sentence, T/A
stands for tense/aspect marker, as there are a number of
tense/aspect markers which can be used in this pattern.
The markers which can go in the negative common sentence
pattern are ma, tɛ, or tɛ plus yɛ or ya.

used in the sentence of identification. Although the Worodu-
gukan data alone does not allow one to classify Lo in terms
of parts of speech, comparative study (see below) will esta-
blish the probably historical source of Lo.

The second pattern which deserves special attention in
Worodugukan can be termed the existential sentence. In all
Manding dialects, there appears to be a relationship between
the sentence of identification and the existential sentence,
but in some other dialects, the relationship is clearer than
it is in Worodugukan. Therefore, discussion of the relation-
ship will be saved for the comparative section below. Examples
of the existential sentence are:

n bɛma-čɛ tɛ donso Le Le   "My grandfather is not a
                                           hunter"

n bɛma-čɛ donso Le Le   "My grandfather is a hunter"

n fa Le donso Le   "It's my father that is a
                                           hunter"

From the first example, it can be seen that the negative
pattern is NP tɛ NP Le Le. Tɛ, again, is the negative copula;
Le is the particle of focus or emphasis. Worodugukan is the
only Manding dialect in which this morpheme is reduplicated
in the existential sentence. In the second example, it can be
seen that the pattern is NP NP Le Le. Again, the reduplicated
particle of focus is evident. In this pattern, however, there
is no morpheme in the position where one would expect a
                                                             23.
tense/aspect marker - between the two noun phrases.

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23. The fact that the copula, yɛ, is often deleted optionally
in Worodugukan suggests that NP yɛ NP Le Le might be possible.
I did not try to elicit it, and it did not occur for three in-
formants all of whom did have a surface copula in other patterns.

Again, this lack of a tense/ aspect marker in the existential sentence is peculiar to Worodugukan of the dialects for which data is available. In the final example, the emphasis has been placed on the first noun phrase. This does correspond to the situation in other dialects, indicating that at least one instance of Le in Worodogukan is a true particle of focus. Again, the possible historical, and perhaps underlying, source of the Worodugukan pattern will be evident after having discussed the comparative data.

Most of the patterns in Worodugukan contain a Noun Phrase subject, a tense/aspect marker, and a predicate phrase - either a verb phrase or a locative. Both of the above patterns deserve special attention in Worodugukan because they do not fit that pattern. The sentence of identification does not have a predicate phrase and, in the affirmative, it does not have a conventional tense/aspect marker. In Worodugukan, the existential sentence does not have a conventional predicate phrase, and, in the affirmative, it does not have a tense/ aspect marker. The imperative pattern in Worodugukan consists only of a predicate phrase - a verb phrase:

<u>bɔ</u>   "go"

<u>a min</u>   "drink it"

<u>a di n ma</u>   "give it to me"

This pattern is common to all of the Manding dialects under discussion. In Maninka, and perhaps some other varieties, it is possible to form imperatives with the second person singular pronoun followed by the verb phrase, in addition

to the aforementioned pattern. This second pattern does not occur in the Worodugukan data, and no attempt was made to elicit it.

As has been stated, most commonly, Worodugukan patterns contain a Noun Phrase, a tense/aspect marker, and a predicate phrase. The predicate phrase may be a postpositional phrase in the pattern NP ɣɛ NP postposition:

n tɛ lu ma	" I am not at home"
sasao ɣɛ a La	"Sickness is on him"
bamao ɣɛ ǰeo kɔ̋	"The crocodile is in the water"

A pro-locative has the same privileges of occurrence as a postpositional phrase in this pattern:

| musoo ɣɛ yan | "The woman is here" |
| a tɛ ǰen | "He is not there" |

There is nothing noteworthy about the locative sentence in Worodugukan, and it will be shown in the comparative section that this pattern is the same in all Manding dialects for which data is available.

Except for the locative sentence, described above, in which either a postpositional phrase or a pro-locative is the predicate phrase, the predicate phrase must be a verb phrase. The pattern NP + tense/aspect marker + Verb could be called the common sentence. In fact, this is the only pattern in which most of the tense/aspect markers can occur. The markers ya, ka, kɔ̋, ɣe, and ma occur only within this pattern. The copula ɣɛ, and the negative copula, tɛ, can also occur in

this pattern as well as other patterns discussed above,
such as the locative sentence. Examples of this pattern are:

n ye wuo san	"I bought the dog"
mamadu ma seku gbɛsi	"Mamadu didn't strike Seku"
a ya taga	"He will go"
n ye tabusi-kan kean bijaya Le	"I learned Commercial Dyula in Bijayah"
a ma a sɔ	"He didn't get it"
a yɛ taga	"Yes, he went"

As the examples show, the verb phrase may be either transitive or intransitive. Furthermore, as the fourth example illustrates, the verb phrase may include postpositional phrases as modifiers and as complements (see discussion of verb phrase above). The NP + tense/aspect marker + Verb Phrase pattern is found in all of the Manding dialects; although this pattern is perhaps the most usual and most important in Worodugukan, and thus deserves attention on that basis, this pattern is equally prominent in other dialects.

The last two patterns discussed have had as predicate phrases a postpositional phrase and a verb phrase respectively. The next pattern to be discussed, called here the durative sentence, shares features of both of the two previous types. It has a verb phrase predicate, but it is formed with the copula and the postposition La:

n yɛ a san La	"I buy it" or "I am buying it"
musa yɛ na La	"Musa is coming"
a yɛ sogo-sogo-kɛ La wagatio bɛ	"He coughs all the time"

This pattern is common to most Manding dialects, although Bird (1966) reports that it is absent in some dialects of Bambara. In Worodugukan, the meaning of this sentence pattern is not restricted to the durative or continous aspect; in some other Manding dialects, this construction is used only for the durative aspect.

As the above examples indicate, the pattern appears to be NP copula Verb Phrase La. Spears (1965) indicates that in Maninka, kan, also a locative postposition, can occur in place of La. It is not known whether other postpositions can appear in Worodugukan.

What this suggests is that the durative sentence may be merely a special type of locative sentence. In the previous section on morphology, it was pointed out that all verbs in Manding dialects have nominal potential. However, discussion of this possibility will be postponed for the comparative section.

The next sentence pattern in Worodugukan to be discussed is one in which the tense/aspect marker is a suffix following the verb; this pattern applies only to intransitive verbs. In most other Manding dialects for which data is available, the pattern NP Verb suffix is the usual pattern for past intransitive sentences. In Worodugukan, the pattern exists, NP Verb La, but the construction has a more restricted meaning (see above section on the tense/aspect markers).[23]

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[23] In Worodugukan, the suffix La is homophonous with the postposition La. Evidence from other varieties shows that La in this pattern is not the postposition but can be explained in terms of phonological developments in Worodugukan.

In Worodugukan, the pattern is indicative of a given act having been accomplished; it often is used in answers to yes-no questions:

a taga La	"Yes, he went"
a don La	"He was able to enter"

This pattern exists only in the affirmative. The negative counterpart of La is ma; However, ma appears in the usual slot for the tense/aspect marker. Furthermore, as the negative of ka in Worodugukan is also ma, the aspectual distinctions may be neutralized in the negative counterparts of La and ka.

The final pattern in Worodugukan is NP tense/aspect marker Adjective. The tense/aspect marker for this construction is a in the affirmative and man in the negative. Although the phonetic shape of the tense/aspect marker for the adjective sentence is not the same for all Manding dialects (it is [a] for Worodugukan and some other varieties, [kə] for the rest), the pattern exists for all of the dialects in this study except Gambian Mandinka. Examples of this pattern from Worodugukan include:

bon a bon	"The house is big"
a man gbiɛ	"It is not difficult"
a a fisa	"It is better"

D. Comparison of Sentence Patterns in Manding Dialects

In this section, the sentence patterns described above for Worodugukan will be compared with corresponding patterns in other Manding dialects. It will be shown that all of the

basic sentence types that have been cited for Worodugukan exist also in all of the other Manding dialects for which data is available, except for the adjective sentence in Vai. and Mandinka. Furthermore, it will be shown that where Worodugukan patterns appear to be different in structure, the differences are relatively superficial.

In all of the dialects under consideration, the sentence of identification translates as, "It's a....." or, "He is a.....". Examples from the various Manding dialects are:

Commercial Dyula:

<u>fundenti bɛ</u>	"It's heat"
<u>muso lo</u>	"It's a woman"
<u>muso tɛ</u>	"It's not a woman"

Maninka:

<u>kɛ le</u>	"It's a man"
<u>kɛ te</u>	"It's not a man"

Eastern Dyula:
24.

<u>čɛ lom</u>	"It's a man"
<u>Nanzara muso lo</u>	"It's a white woman"
<u>londa te</u>	"It's not a stranger"

Bambara:

<u>tɔrɔ tɛ</u>	"There is no trouble"
<u>muso do</u>	"It's a woman"
<u>hɔrɔ bɛ</u>	"There is peace"

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24. The example with [lom] is from my own data; the other Eastern Dyula citations are from Delafosse.

Kuranko:

<u>mogo le</u>	"It's a person"
<u>suri ma</u>	"It's not Suri"

Vai:

<u>kai mu</u>	"It's a man"
<u>nga maa</u>	"It's not me"

Gambian Mandinka:

<u>basoo le mu</u>	"It's a lizard"
<u>sanoo te;</u> <u>kodoo le mu</u>	"It's not silver; it's gold"

All of the above dialects have the same pattern in the negative - a noun phrase plus a regular copula - cognate with Worodugukan <u>te</u> in most instances, although cognate with the Worodugukan negative <u>ma</u> in the case of Vai and Kuranko.

In the affirmative, the situation is slightly more complicated. The Worodugukan morpheme <u>Lo</u> is cognate with the forms from Eastern Dyula, Commercial Dyula and Bambara, and, like them, is a morpheme which serves no other function. No more than this need be said to establish that the Worodugukan pattern is not unique. However, on the basis of comparative data, it seems possible to make an intelligent speculation about the source of this construction from which all of the examples are historically derived. In this way the Worodugukan form cannot only be related to those varieties which also use a special morpheme in the sentence of identification, but also to those which do not. Those which do not fall into three categories, the first of which use the particle of focus, le, in this construction. In this group are Maninka and Kuranko.

Bird (1966) indicates that some dialects of Bambara also use the particle of focus in this construction. The second category is those dialects which use just a tense/aspect marker. We have seen that all of the varieties use a tense/aspect marker in the negative. The Bambara and Commercial Dyula examples show that some varieties which ordinarily use a special morpheme can also use a tense/aspect marker (be or bɛ). Vai is in the second category. In the third group are those varieties which use the particle of focus and the tense/aspect marker. Gambian Mandinka and Khassonke fall into this category.

The Eastern Dyula form, lom, provides the clue to the probable relationship between the various forms. Let us assume that *le mu became *lomu, then lom and lo in some dialects.[25] Then, finally, it became do in Bambara, in accordance with a general sound change, and in some varieties of Worodugukan, Lo became Lö.[26]

Worodugukan, then, along with Bambara, Eastern Dyula, Commercial Dyula, and probably a good number of other dialects for which data is not available, developed a new morpheme which was not identical with either the particle of focus or a tense/aspect marker. Those that use either the tense/aspect marker or the particle of emphasis, however,

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[25] It should be noted that lem is found in Gambian Mandinka. These two examples, lom and lem, if they are not derived from le + mu, are the only instances in any of the dialects for which data is available of a morpheme ending in [m].

[26] My principal informant used Lö; three others used Lo.

are not significantly structurally different from Worodugu-kan, but have merely either not undergone the change from two morphemes to one at all, retaining both <u>le</u> and <u>mu</u>, or have chosen one or the other instead of producing a new form.

The above analysis suggests that <u>Lo</u> ought to be considered a tense/aspect marker rather than a particle of emphasis, if it need be considered either.[27] The sentence of identification clearly required a tense/aspect marker in the original source and in the negative it still does for all dialects.

The comparative data will also show that the Worodugukan pattern for the existential sentence, although different superficially from other varieties' corresponding patterns, is historically and, at an underlying level, well within the general Manding structure.

Most of the examples below, unlike the Worodugukan pattern of NP NP <u>Le</u> <u>Le</u>, follow the pattern NP copula NP postposition. <u>Ye</u> is a postposition in Commerical Dyula and Bambara, as is <u>di</u> in Maninka, <u>ti</u> in Gambian Mandinka, and <u>la</u> in Kuranko and Vai. The status of <u>e</u> in Eastern Dyula is unclear; it could be cognate with <u>ye</u>. Examples of the existential sentence in the various Manding dialects under discussion are:

Commercial Dyula:

<u>n bɛ dɔgɔtɔgɔ ye</u>   "I am a doctor"

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[27] Bird (1966) treats <u>do</u> in Bambara as a form which replaces an underlying predicate. He presents an alternate analysis, however, of <u>do</u> as a variant of the emphatic form. The analysis here suggests that <u>do</u> like <u>lo</u> should be considered a tense/aspect marker, albeit with restricted privileges of occurrence.

<u>ni tɛ mɔgɔ-jɔrɔ-ko ye</u>   "This isn't a disturbing thing"

Bambara:
                            28.
<u>a ye dugutigi ye</u>   "He is a village chief"

Maninka:

<u>i benba te yɛ-fa-la di</u>   "Your grandfather is not a
                                    fisherman"

Gambian Mandinka:

<u>bii le mu dindingolu
   la la barungo ti</u>   "Today is the boy's circum-
                              cision dance"

<u>mun ne nyin ti</u>   "What is this?"

<u>wo mu kuu baa le ti</u>   "That is an important business"

Kuranko:

<u>mogo nyime le Suri la</u>   "Suri is a good person"

<u>wuli ma wo la</u>   "That's not a dog"

Eastern Dyula:

<u>a be morho e</u>
                    29.
<u>morho-mio morho
   bere lo</u>   "This person is an important
                    person"

Vai:

<u>Vaim mu i la</u>   "You are a Vai"

<u>faniafɔma ma a la</u>   "You are not a liar"

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28. Bird (1966b) indicates that in some dialects <u>be</u> is used
in this construction. In either case, <u>te</u> is the form for the
negative.

29. Delafosse (1901) cites this construction as an alternate
form for the existential sentence. Structurally, this is a
sentence of identification with two noun phrases before <u>lo</u>,
the only such case encountered in any of the dialects. It is
included here with the existential sentence because of its
meaning.

The examples in Gambian Maninka are interesting because in one case the tense/aspect marker or copula mu has been deleted, in one case the le has been deleted, and in one case neither is deleted. What this suggests, together with the other data, is that the origin of this construction is NP le tense/aspect marker NP postposition. In Maninka and Kuranko, the copula came to be obligatorily deleted, leaving le.

The implications of such a hypothesis for the Worodugu-kan examples are as follows: In Worodugukan, there may have been a tendency to have the particle of emphasis or focus on the second noun phrase. Through the process of assimilation, *Le ye then might have become Le Le. Now, even when the focus is shifted back onto the first noun phrase, the final morpheme remains Le.

There is also an important suggestion to be made about the relationship between the sentence of identification and the existential sentence. The data suggests that the sentence of identification is merely the first half of the existential sentence without the postpositional phrase. In Maninka, Mandinka, Vai, and Kuranko, this is literally true.

This is further supported by the fact that in many dialects one can form a sentence of identification, semantically, by putting ni, "this", as the second noun phrase in an existential sentence. An example from Commercial Dyula is:

n fa le bɛ ni ye   "It's my father"

(cf. n fa lo   "It's my father")

The surface form of the Worodugukan existential sentence, plus the fact that there is no copula mu, make it impossible from the Worodugukan data alone to see the relationship between the two sentence patterns. Nevertheless, the Worodugukan changes from what might have been the original proto-pattern for both sources are minimal. In one case, Le plus a copula have become Lo, a development which has also taken place in a number of other dialects. In the second case, Le ye became Le Le, again a change which is basically phonological in nature.

If there are slight differences between the Worodugukan patterns and the patterns in some other dialects in the sentence of identification and the existential sentence, the differences are much less in the remaining patterns.

In all of the Manding dialects it is possible to form an imperative with only a verb phrase:

Maninka:

wa   "go"

Bambara:

a fɔ n kɔ   "say it again"

Kuranko:

ta   "go"

Vai:

taa   "go"

Commercial Dyula:

do   "enter"

Eastern Dyula:

    a tugu   "join it"

In some Manding dialects, it is possible to form an imperative sentence with the second person pronoun and a verb phrase. Of these, in some it is optional, such as in Maninka, and in some it is obligatory under certain conditions (in Kuranko, the second person plural pronoun, wo, must be used when speaking to more than one person; in Vai, transitive verbs require the pronoun plus the verb phrase, although intransitive verbs take only the verb phrase). Worodugukan may have sentences of the pattern Pronoun + Verb Phrase, but none appears in the data.

The locative sentence is virtually the same in all of the Manding dialects under discussion. As in Worodugukan, the locative phrase may be either a postpositional phrase - a noun phrase plus a postposition - or a prolocative. Examples from the various dialects include:

Commercial Dyula:

    a bɛ dandan kan   "It is on the wall"

    muso bɛ yan   "The woman is here"

    muso tɛ yan   "The woman is not here"

Bambara:

    dyɛgɛ be dyi kɔnɔ   "The fish is in the water"

    Sedu tum be yan de   "Sekou was here"

Gambian Mandinka:

    a be bungo kono   "He is in the house"

Kuranko:

fen fen sa yan	"Nothing is here"
N be yan	"I am here"
N be yi fe	"I want water" ("I am with water")

Maninka:

kɛ ye si kan	"The man is on the buffalo"
muso te yan	"The woman is not here"

Vai:

ke felabɛm bolo	"I have two houses" ("two houses are in my hand")
a bɛ ni	"He is here"
m bɛi kɔ	"I am under you"

As we have noted, the locative sentence is constant in structure throughout the Manding dialects, and Worodugukan is no exception. The relationship between this pattern and the existential sentence has been noted - in most dialects the existential sentence takes the shape NP copula NP postposition, although the postpositions used are often not truly locative in meaning. The relationship between this pattern and the durative sentence has also been recognized. Here, the principal problem to considering this pattern as a locative is that the object of the postposition seems to be a verb phrase. Nevertheless, although it seems best to consider all three patterns separately, the locative sentence is important not only for its own frequency of use, but because it may be a source for other constructions.

The common pattern occurs in all Manding dialects for

which information is available, and, as in Worodugukan, it
is the pattern which takes all of the tense/aspect markers
except the adjective tense/aspect marker and, in some dia-
lects, the copula. Examples of this construction in the var-
ious dialects are:

Bambara:

a be dyiri tigε   "He cuts the tree"

Commercial Dyula:

nafolo bε nafolo were   "Riches call riches"

Maninka:

n ka kε yen   "I saw the man"

Khassonke:

a xa alu yen   "They saw them"

Eastern Dyula:

ar ka ni yeni   "They insulted me"

Kuranko:

i si a toro   "You will trouble him"

Vai:

anu n torowa dsea   "They will experience
                       trouble"

Examples of this construction with intransitive verbs
are:

Bambara:

a be taga   "He goes"

Commercial Dyula:

n ma taga   "I didn't go"

Maninka:

a di ta   "He will go"

Kuranko:

A ara na   "He has come"

Vai:

a a sɛlɛ   "He has climbed up"

Gambian Mandinka:

i si n danku   "You should answer me"

The common pattern is more important, perhaps, in Worodugukan than in some other Manding dialects because there are so many tense/aspect markers in Worodugukan that can go in this pattern. In Bambara and Maninka, for example, intransitive verbs require the pattern NP + Verb + suffix. In Worodugukan, however, the common pattern is the most usual way of forming the past tense of an intransitive verb. Furthermore, both ye and ka can go in this pattern with an intransitive verb, in Worodugukan. The difference in aspect between ye and ka is not entirely clear (see section on tense/aspect markers above); nevertheless, in Worodugukan there are two affirmative past tense markers which can be used in the common pattern, in addition to ma, the negative counterpart of both, while in some other dialects, only ma can be used in this pattern with intransitive verbs.

The durative pattern is common to all Manding dialects for which data is available. In some dialects, the durative pattern forms a clear contrast with the common pattern in terms of durative and non-durative aspect. Commercial Dyula is one such dialect:

n bɛ a san   "I buy it"

<u>n bɛ a san na</u>   "I am buying it"

In Worodugukan, the durative sentence would be used to translate both of these sentences. Thus, the durative sentence always includes the durative aspect, but in some dialects, Worodugukan, and probably Maninka and Gambian Mandinka, the durative sentence may not be exclusively durative in terms of meaning.

Examples of the durative sentences are:

Maninka:

<u>n ye muso yen na</u>   "I see the woman"
                        "I am seeing the woman"
       30.

Bambara:

<u>a te dyiri tigɛ la</u>   "He isn't cutting a tree"

Commercial Dyula:

<u>n bɛ nisi faga la</u>   "I am killing the cow"

Eastern Dyula:

<u>a be a farha ra</u>   "He is killing him"

Gambian Mandinka:

<u>n be muso nyinoo le la</u> "I am seeking a wife"

Kuranko:

<u>a ye na la</u>   "It is coming"

In all of the dialects under discussion, it seems that the postposition <u>la</u>, "on", is the principal postposition used in this construction; however, Spears has indicated that the postposition <u>kan</u> can be used in Maninka (Spears, 1965) and

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30. According to Bird (1966), the durative sentence has been lost in some Bambara dialects. Actually, Bird's is the only account of Bambara that includes the durative sentence to my knowledge; Travele, Bazin, and Molin do not.

in Bambara (Spears,1972b) and that the postposition d‿ɔ is permissible in Vai (Spears, 1972b). The fact that a number of different locative postpositions can be used in this construction further supports the hypothesis that the durative sentence is a subset of the set of locative sentences.

A second piece of evidence that supports this interpretation is the fact that in Gambian Mandinka, verbs in this construction take the definite marker -o. This is not the case, however, in Worodugukan, which also has a segmental definite marker.

In this study, the durative sentence will be considered separately. Although it must be recognized that all morphemes having verbal potential also have nominal potential, and that the structure of the durative sentence is, in most dialects, identical to a locative sentence, it would seem convenient to differentiate verb phrases from other structures and to consider the durative sentence to contain a verb phrase.

It is clearly necessary to distinguish between noun phrases and verb phrases. A kɛ , "do it", or, "its doing", if one prefers, and a fa, "his father", or, "its father", have different privileges of occurrence:

Worodugukan:

a kɛ	"do it"
but *a fa	"his father"
n yɛ a kɛ La	"I am doing it"
*n yɛ a fa La	"I am at his father's"
a fa Lo	"It's his father"

*a kɛ Lo	"It's it's doing"
n yɛ afɛ ka a kɛ	"I want to do it"
*n yɛ fɛ ka a fa	"I want his father"

Those phrases which will fit into the pattern n yɛ ___ , "I did...." in Worodugukan can also fit in the pattern: n yɛ ___ La. It would seem inconsistent to consider them verb phrases in one case and noun phrases in the other. Here they will be considered to be verb phrases.[31]

As has been noted, the Intransitive Sentence occurs in Worodugukan; however, it is relatively unimportant. Sentences which appear in the form of the intransitive sentence, NP + Verb + suffix, in other dialects are translated into Worodugukan in the common sentence pattern. Nevertheless, although the meaning of the Worodugukan pattern is somewhat different, the pattern is identical in structure to the corresponding pattern in other Manding dialects. Examples from the other dialects are:

Maninka:

| a ta ra | "He left" |

Bambara:

| a taga ra | "He left" |

Kuranko:

| a ta ra | "He left" |

Gambian Mandinka:

| a taa ta | "He left" |

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[31]. For a discussion of this problem in Southwestern Mande languages, see Innes (1967) and Spears (1971).

Vai:

    <u>a buri a</u>   "He ran away"

Eastern Dyula:

    <u>a farha-ra</u>   "He died"

Commercial Dyula:

    <u>a taga ra</u>   "He left"

It should be noted that in most dialects, Worodugukan being an exception because of the aspectual restrictions on the pattern, the intransitive sentence is used to form the past tense of adjective sentences (in Worodugukan, the common sentence pattern is used). A suffix, -<u>ya</u>, is added to the adjective. An example from Commercial Dyula is:

    <u>a di-ya ra</u>   "It was sweet"

    (cf. <u>a ka di</u>   "It is sweet")

The adjective sentence exists in all of the dialects under discussion with the exception of Gambian Mandinka. As has been noted, the adjective sentence is used only in the present tense; for past tense, the intransitive verb sentence is used. Bird (1966) considers predicate adjectives to be a sub-set of verbs. If he is correct, then the Adjective Sentence pattern is a sub-set of the set of Common Sentences, the pattern of NP + <u>ka</u> + Adj. (or, in the negative, NP + <u>man</u> + Adj.) being merely an instance of NP + tense/aspect marker + Verb. However, if predicate adjectives are verbs, they are in any case, a special class. First, they only take the tense/aspect marker <u>ka</u> (<u>a</u> in Worodugukan). Second, they require a suffix before they can take the verbal suffix -<u>ra</u>. Therefore, the

adjective pattern will be considered a separate pattern here.
Examples of the adjective pattern in the various dialects are:

Bambara:

    <u>a ka nyi</u>   "It is good"

Maninka:

    <u>wulu ka bon</u>   "The dog is big"

Commercial Dyula:

    <u>wo ka jugu</u>   "It is evil"

Kuranko:

    <u>Tige a di n ye</u>   "Peanuts are sweet to me"

The only thing at all remarkable about the adjective
sentence in Worodugukan is that the tense/aspect marker <u>a</u>,
in the affirmative, is different phonetically from [ka]
found in all of the other varieties with the exception of
Kuranko.

Otherwise, the adjective pattern in Worodugukan corre-
sponds to the adjective pattern in other Manding dialects.
This is, as has been demonstrated, the rule rather than the
exception. The sentence patterns found in Worodugukan are
found in the other Manding varieties. In the case of two pat-
terns, the existential sentence and the sentence of identifi-
cation, the differences between the Worodugukan pattern and
those of other varieties is relatively insignificant although
it may appear at first to be grammatical at first glance. In
these two patterns there is a lot of variation within the dia-
lects as a whole, due, perhaps, to some instability in the
original proto-pattern. For the sentence of identification,

Worodugukan belongs to that group of dialects which has a morpheme which is neither a copula nor a particle of focus but which probably derives from a merging of the two. The existential sentence in Worodugukan is marked mainly by a second emphatic particle <u>Le</u> appearing where there would be a postposition in other dialects. The hypothesis made here is that this probably came about as a result of phonological assimilation.

Otherwise, the structural differences between a given pattern and its counterparts in other Manding dialects is minimal. It is true that in some cases, the meaning of a Worodugukan pattern in terms of tense or aspect differs from the more usual situation in the Manding dialects under consideration, but Worodugukan is conservative both in terms of its repertoire of basic patterns and in the structure of those patterns.

E. Tense and Aspect

In Manding dialects, neither noun phrases nor verb phrases are inflected for tense or aspect. Rather, the tense and aspect of the sentence are indicated by a morpheme or phrase which, with one exception, goes between the subject noun phrase and the predicate phrase.

In this study, such morphemes will be termed tense/ aspect markers, following Bird (1966). They can also be called verbal operators (Rowlands), Verbals (Spears, 1965), Auxiliaries (Bird, 1972), or simply tense morphemes. Tense and Aspect can be indicated by a phrase or a series of

tense/aspect markers. Here, such a phrase will be called a complex tense/aspect marker, as opposed to a simple tense/aspect marker consisting of only one morpheme.

One such morpheme in Manding dialects deserves special attention and requires a special term. In all of the dialects under discussion, there is a tense/aspect marker which is used for locative sentences and for the durative aspect. This is the only tense/aspect marker for which the verb kɛ, "to make or do" can be substituted under certain circumstances. The phonetic shape of the morpheme varies from dialect to dialect, but the identity of the various shapes is apparent. In this discussion, the morpheme in question will be termed the copula. The copula and its negative counterpart, here called the negative copula, are a subset of the set of tense/aspect markers. The function of the copula will be further discussed in the comparative part of this section.

F. The Tense/Aspect System of Worodugukan

The following sentences illustrate the tense/aspect system of Worodugukan. Sentences with a transitive verb, san, "to buy", will be presented first. Sentences with an intransitive verb, taga, "to go", will follow. The only difference between the tense/aspect system of transitive verbs and of intransitive verbs is that, for transitive verbs, the completive past marker is ka, while for intransitive verbs, the tense/aspect marker is La. La is suffixed to the verb; it is the only tense/aspect marker which does not go between the subject and the verb in Worodugukan. It is cognate with ra

in Bambara and Maninka and with _ta_ in Gambian Mandinka - also, with suffixes (see section dealing with comparative tense/aspect systems).

Because there is relatively little agreement on names for the various aspects found in Manding dialects by different scholars, the names used here cannot be claimed to represent any sort of established usage, although all are used by one or more students of Manding Dialects. The names as they apply to Worodugukan will be explained in this section and approximate translations will be given. The names used in the discussion of the Worodugukan tense/aspect system will be carried over into the comparative section.[32]

The tense/aspect markers for transitive verbs in Worodugukan can be seen in the following sentences:[33]

narrative past	n ye a san	"I bought it"
completive past	n ka a san	"I bought it"
future	n ya a san	"I will buy it"
ingressive	n kö a san	"I am about to buy it"

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[32] In attempting to compare the tense/aspect systems of the various dialects, I have taken the liberty, based on available data, of considering certain tense/aspects in different dialects to be equivalent. In doing so, one faces not only the problems inherent in comparing any semantic systems but also the problems inherent in comparing research carried out by different researchers with differring theoretical orientations and different degrees of familiarity with the respective dialects.

[33] The difference between the narrative and completive aspects will be discussed below.

durative [34.]	<u>n yɛ a san La</u>	"I am buying it"
stative	same as above	"I buy it habitually"
completive present	<u>n yɛ a san</u>	"I do buy it"
conditional	<u>n te ya a san</u>	"I would buy it"
pluperfect	<u>n te yɛ a san</u>	"I had bought it"
imperative	<u>a san</u>	"Buy it"
hortative	<u>ala ka bi di</u>	"May Allah give you today"
narrative past – negative	<u>n ma a san</u>	"I didn't buy it"
completive past – negative	same as above [35.]	"I didn't buy it"
future negative	<u>n tɛ ya a san</u>	"I won't buy it"
ingressive negative	<u>n tɛ ko̎ a san</u>	"I am not about to buy it"
negative durative	<u>n tɛ a san La</u>	"I am not buying it"
negative stative	same as above	"I do not buy it habitually"
negative completive	<u>n tɛ a san</u>	"I don't buy it"
negative conditional	<u>n tɛ te ya a san</u>	"I wouldn't buy it"
negative imperative	<u>i kana a san</u>	"Don't buy it"
negative pluperfect	<u>n tɛ te y a san</u>	"I hadn't bought it"

The tense/aspect system for intransitive verbs can be

illustrated:

narrative past	<u>n ye taga</u>	"I went"

[34.] There is no formal distinction between the durative and the stative aspects. The pattern termed "durative sentence" is used for each. The stative is included here for comparison later.

[35.] The narrative-completive distinction is neutralized in the negative.

36.

completive past	n taga La	"I went"
future	n ya taga	"I will go"
ingressive	n ko̎ taga	
durative	n yɛ taga La	"I am going"
stative	same as above	"I go habitually"
completive present	n yɛ taga	"I do go"
conditional	n te ya taga	"I would go"
pluperfect	n te yɛ taga	"I had gone"
imperative	taga	"Go"
adjective	musoo a nyi	"The woman is good"
narrative past - negative	n ma taga	"I didn't go"
completive past - negative	same as above	"I didn't go"
future negative	n tɛ ya taga	"I will not go"
ingressive negative	n tɛ ko̎ taga	"I am not about to go"
negative durative	n tɛ taga La	"I am not going"
negative stative	same as above	"I do not go habitually"
negative completive	n tɛ taga	"I do not go"
negative conditional	n tɛ te ya taga	"I would not go"
negative imperative	i kana taga	"Don't go"
negative pluperfect	n tɛ te yɛ taga	"I hadn't gone"
adjective	a man nyi	"It isn't good"

36. In Worodugukan the suffix La is homophonous with the post-position La found in the durative sentence; however, comparative study indicates that they are different morphemes.

G. Tense/Aspect Markers in Manding Dialects

In this section, the tense/aspect system of Worodugukan will be compared with aspects of other Manding dialects. The names of aspects used in the presentation of the Worodugukan system will be also used in this section. Although various names are used in the original sources, the tense/aspect markers grouped together appear to be comparable. Not all of the Manding dialects under consideration make all of the aspectual distinctions. It has already been pointed out that Worodugukan, for instance, does not formally mark the distinction between durative and stative. In the present tense, on the other hand, Worodugukan appears to be the only dialect under consideration to distinguish between completive and non-completive aspects in the present tense.

The discussion will be arranged in terms of tense and the various aspectual distinctions of various dialects within a given tense will be compared. The following table will indicate which tense/aspect markers are used in the various tenses and aspects:

37.

Manding Tense/Aspect Markers

	Worodu-gukan	Maninka	Bambara	C. Dyula	E. Dyula	Mandinka	Kuranko	Vai
Present				38.				
Durative	yɛ...La	ye...la	(be..la)	bɛ...la	bɛ...la	b:...	be...la	bɛ.lɔ
Stative			be	bɛ	absence of t/a marker	ka	si	wɛ
Completive	yɛ							
Hortative	ka	ka	ka	ye	ka	ye	ni	
Past								
Narrative	ye						ya, -ra	
Completive [39]	ka,-La	ka,-ra	ye,-ra	ka,-ra	ka,-ra	ye,-ta	ara	a
Future	ya	di	be-na	bɛ-na	nyini yɛ-na	si	si	wɛ..a
Ingressitve	kö	ye...kan						na
Adjective	a	ka	ka	ka	a	-ta	a	
Pluperfect [40]	te	tere	tun	tun	tun	nung	nun	

37. Blank spaces probably indicate an absence of an aspectual distinction; it should be kept in mind, however, that more data might fill in some of the blanks.

38. Bird (1966a) indicates that the aspectual contrast between durative and stative has been lost in most Bambara dialects; however, he includes it in his analysis.

39. The second entry, in each case, represents the suffix which is on intransitive verbs. The first entry, in each case, is the tense/aspect marker for transitive verbs.

40. The pluperfect morpheme goes before other tense/aspect markers; it does not occur alone. The Mandinka and Kuranko forms (both [nuŋ] phonetically) also do not occur alone; however, they appear to be sentence adverbs going at the end of a sentence. They are included here because they appear to be semantically equivalent to the other forms. The Maninka form, bara, might also be equivalent to the pluperfect in Worodugukan. Worodugukan does not have a cognate of bara, however.

1. The Copula and other Present
Tense Markers

In Worodugukan, the copula has the phonemic form /yɛ/.
The shape of the copula differs from Manding dialect to Man-
ding dialect - in almost all, dialects, the copula begins
with either a voiced bilabial stop or a palatal semi-vowel.
Thus:

	<u>b</u>		<u>y</u>
Bambara:	be	Maninka:	ye
C. Dyula:	bɛ	WDK:	yɛ
Kuranko:	be and ye	Kuranko:	ye and be
E. Dyula:	be		
Vai:	be and we		

Whether or not the copula is related to some other mor-
pheme is difficult to determine, but some interesting specu-
lations have been made. The most likely source would be the
verb meaning, "to make or do", <u>kɛ</u> or <u>ke</u> in various dialects.
Note the following pair of sentences:

Worodugukan:	<u>a yɛ yan</u>	"He is here"
	<u>a ya kɛ yan</u>	"He will be here"

This possibility receives further support from the mor-
phophonemic rules of Worodugukan; <u>n</u> + <u>yɛ</u> is [ŋyɛ] (although
<u>n</u> + <u>ye</u> is [ɲye], as would be expected). Also, there are cog-
nates such as the possessive particle which is <u>ya</u> in Worodu-
gukan and in Bambara. Such evidence is fragmentary but sugges-
tive.

It is possible that the copula may be related to the

verb meaning "to see". This appears to be a less likely explanation (for discussion of the evidence, cf. Spears,1972b).

In Kuranko, be and ye are allomorphs, the former appearing after the first person singular pronoun and the third person plural pronoun only (Kuranko, p. 5).In Vai, one T/A marker is generally wɛ, but bɛ is the first person singular allomorph, and the form yɛi is evidently in free variation with wɛ and wɛi (Heydorn, p. 77). This suggests that perhaps at one time ye (or yɛ), be (or bɛ), and perhaps ke (or kɛ) were all allomorphs of a single verb. It is hoped that more research will throw further light on this question.

Although the forms show some variation, the function of the copula in the various dialects shows little, although there are some differences from dialect to dialect. In all of the dialects under consideration, the copula is required in the locative sentence and in the durative sentence. Examples have been presented in the sections above on those patterns. In many dialects, the copula is also found in the existential sentence. In Maninka, Commercial Dyula, and Eastern Dyula, the copula is the same in the existential sentence as in the locative sentence. In Bambara, although the copula be can appear, the most usual form is ye. This appears to be the past tense marker; however, the fact that the negative is te rather than ma, the usual past tense negative, suggests that ye here may represent an allomorph of the copula that has disappeared otherwise.

Vai and Gambian Mandinka have a special copula, mu, that

appears only in the existential sentence and the sentence of identification. It has been suggested elsewhere that the form <u>lo</u> represents a reflex of <u>mu</u> in Bambara, Commercial Dyula, and Eastern Dyula. <u>Mu</u> could be considered an allomorph of the copula.

In Kuranko and Worodugukan, the copula has dropped out in the affirmative existential sentence but the fact that <u>te</u> or <u>tɛ</u> appear in the negative suggests that the copula may have appeared previously. Thus, although the various languages differ as regards the copula in the existential sentence, this difference may have come about relatively recently and does not seem to represent any basic difference in the nature of the copula in the various languages.

In some dialects, the copula functions as a tense/aspect marker without the necessity of a postposition. In Commercial Dyula and in some dialects of Bambara, the copula without a postposition signifies stative present tense.[41] In Commercial Dyula there is a contrast in aspect between:

| <u>n bɛ wulu san</u> | "I buy the dog" |
| <u>n bɛ wulu san na</u> | "I am buying the dog" |

In Worodugukan, the same construction exists, but it has a much more restricted meaning. <u>N yɛ a san</u> means something like, "Yes, I can buy it" or "Yes, I do buy it". It answers a yes-no question rather than reporting an on-going activity. This construction in Worodugukan can be considered the completive aspect, present tense. It is certain that the

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[41.] Stative is taken here to mean non-durative or habitual, in contrast to the durative or progressitve aspect.

Worodugukan construction with the copula but without the post-
position is not equivalent to the Commercial Dyula construc-
tion. A Worodugukan informant will translate both of the
above sentences of Commercial Dyula as n yɛ wü san La in
Worodugukan.

Gambian Mandinka has a stative present tense, formed with
the tense/aspect marker ka:

n ka taa bolong daa le   "I go to the river to
la furu tomongo la   pick up mudfish"

In form this marker corresponds phonetically to the
marker used for adjectives in some other dialects.[42] The
meaning in Mandinka seems to be equivalent to the stative
present in Commercial Dyula and Bambara.

Thus, many dialects do have aspectual distinctions in
the present tense between durative and stative. Worodugukan
does not have such an aspectual difference, but there does
seem to be an aspectual difference between narrative and
completive. In form, the completive present in Worodugukan
is equivalent to the stative in Commercial Dyula and Bambara
- the copula is used without a postposition.

[42.] There are two interesting questions, neither of which can
be answered at this time. First, is there a cognate relation-
ship between the a used in adjective sentences in Worodugu-
kan, Kuranko, and Eastern Dyula and ka used in Bambara? It
is interesting to note in this connection that, according to
Welmers (1963), both a and ka are "associative particles" in
Niger-Congo languages. The second question: is there a rela-
tionship between the ka stative in Mandinka and the ka used
in adjective sentences? No dialect under consideration here
uses ka for both aspects; however, adjective sentences might
be conceivably stative in terms of aspect. It is also possible
that the ka used in adjective sentences is the same morpheme
as the past tense ka.

Maninka and some dialects of Bambara have neither distinction. In Maninka both the durative and non-durative aspects are expressed by the construction NP copula Verb Phrase postposition. In some dialects of Bambara, both aspects are expressed by the construction NP cópula Verb Phrase. In these dialects there is neither a formal distinction between constructions with the postposition and without it, nor is there an aspectual distinction between durative and non-durative aspects.

2. Past Tense

Worodugukan is the only dialect of those under consideration that has a _ye_ past tense and a _ka_ past tense. Otherwise, various dialects seem to have chosen between _ye_ and _ka_.

_ye_	_ka_
Bambara	Maninka
Gambian Mandinka	Commercial Dyula
Worodugukan	Eastern Dyula
	Khassonke
	Worodugukan
	Kuranko (_ya_)
	Vai (_a_)

The difference in Worodugukan is one of aspect. In Worodugukan, _ye_ can be considered to have a narrative aspect. A sentence with _ye_ simply reports that an event happened. The tense/aspect marker _ka_ can be said to indicate the completive aspect. A sentence with _ka_ tends to answer the question of whether something was accomplished or not. Although the marker _ye_ would be used to translate an English or French past

sentence, the sentence with __ka__ can occur alone. The meaning, however, is of something having been accomplished, of the subject of the sentence having been able to do something. More often, this copula is used in a compound sentence such as:

Worodugukan:

a ka wɛ sɔ, a ma <u>bara-kɛ</u>	"He earned money without working"

In Worodugukan, the intransitive equivalent of __ka__ is the suffix -__La__:

a don-La, a ma bon <u>La gbɛsi</u>	"He entered without knocking"

As has been stated, however, Worodugukan informants will translate sentences from other dialects that have __ka__ and -__ra__ with __ye__:

Commercial Dyula	Worodugukan	
a tagara	<u>a ye taga</u>	"He went"
n ka a san	<u>n ye a san</u>	"He bought it"

This suggests that such an aspectual distinction may have been present in proto-Manding, and that such a distinction was lost in most dialects. Two bits of evidence tentatively support this hypothesis. First, the distinction exists in Kuranko. In Kuranko there is a contrast between:

A tara (narrative)	a ya wo ma (narrative)
A ara ta (perfect)	a ara wo ma (perfect)

The problem here is that the narrative forms in Kuranko are cognate with the completive forms in Worodugukan, but this fact does not necessarily disprove the hypothesis.

The second bit of evidence that suggest that there may

have been a distinction between ye and ka in aspect comes
from Gambian Mandinka. In Mandinka, the usual past marker is
ye. However, in the first person singular n + ye becomes
⟨ngaa⟩([ŋa]). This does not seem to be ordinary phonetic
assimilation, and it may be that when the aspectual distinc-
tion collapsed, the first person singular comes from one form
while the other forms come from the other, much as in English
"be" and "are" derive from different verbs although they are
now part of the same paradigm. The above hypothesis is specu-
lative. What is definite is that there is an aspectual dis-
tinction in Worodugukan that is not prevalent throughout the
Manding dialects and that the forms for the past tense in the
various dialects correspond to either one or the other of the
two Worodugukan forms.

In the negative, this aspectual distinction is neutra-
lized in Worodugukan and thus the Worodugukan marker ma, for
both aspects, corresponds to ma in the other dialects for all
cases.

3. Future

The future construction in Manding dialects is puzzling
in that there seems to be few cognates throughout the group.
Furthermore, the structure of the future tense/aspect marker
differs somewhat from dialect to dialect. The Worodugukan
tense/aspect marker ya is shared by no other dialect, for
example, nor is the Maninka di. In Worodugukan, the negative
is formed by adding tɛ before ya, although no copula appears
in the affirmative. This also is unique among the dialects

under consideration.

The various future copulas in the dialects under consideration are:

Bambara:	be-na or na	negative:	te-na
Maninka:	di		tɛ
G. Mandinka:	si		te
Kuranko:	si		te
E. Dyula:	ye-na or nyini		te-na
Vai:	wɛ...a		wele...a
C. Dyula:	bɛ-na		tɛ-na
Worodugukan:	ya		tɛ-ya

Three of the varieties appear to be derived from the verb meaning "to come", na. According to Bird (1966), be-na appears in some Bambara dialects and na in others. Other accounts of Bambara (Bazin, Molin, and Travele) favor na alone. The Maninka marker di could similarly come from the verb di, "to give". Delafosse (1929) cites nyini for Eastern Dyula, which he states means, "to want"; however, field notes from two recent observers give ye na. [43] This suggests an explanation for Worodugukan. Koyaga, a dialect closely related, has ye-na in the future. It is possible that the Worodugukan ya form could have come from yɛ + na. If this were true, it would explain why a negative copula is necessary to form the negative in addition to ya. It would not be possible any more to substitute tɛ for yɛ in the new form, and tɛ would have to be

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[43]. See Dumestre (1971). Also consulted were field notes of Tina Schraeger.

added.

The Bambara, Commercial Dyula, and Eastern Dyula forms seem to be a case of the copula plus an auxiliary verb, na.

It is not known whether there is any relationship between the Maninka form di and the Kuranko and Mandinka form si. The Vai form appears to be unique and, according to Heydorn, is not used very much.

Worodugukan has a second form with a relationship to simple future tense, the tense/aspect marker of which is kö (ki for some dialects). N kö a san is translated as, "I am about to buy it". The meaning seems to correspond to what Heydorn (1970) calls the ingressive aspect in Vai, a form which is formed in Vai with na, "to come" as an auxiliary. It also seems to correspond in meaning to the durative sentence with kan as the postposition in Maninka and Bambara. Following Heydorn, we will call this the ingressive aspect. The negative in Worodugukan is formed by placing tɛ before kö, as with the simple future.

4. Pluperfect and Conditional Aspects

In Worodugukan, the pluperfect aspect is expressed by a complex tense/aspect marker te + yɛ.[44] In all of the dialects, except for Vai, this aspect is formed with a regular tense/aspect marker plus an additional morpheme. Bambara tun (also

[44]. Bird maintains that tun indicates past tense and is the only real tense distinction in Bambara. The analysis here is, obviously, different. The pluperfect seems to be a term which adequately characterizes this construction in Worodugukan and perhaps other Manding dialects, but it may not imply everything meant by the term in traditional grammar.

found in Odienne Maninka and Commercial Dyula), Maninka
__tɛrɛ__ and Worodugukan __te__ form part of a compound tense/aspect
marker. In Kuranko and Mandinka, however, the pluperfect is
formed with the simple past marker plus an adverbial morpheme
which goes at the end of the sentence - __nun__ in Kuranko, __nung__
in Mandinka; e.g.,

      Kuranko: __a ara ta nun__   "He had gone"

Perhaps the best evidence of the relationship between
the tense/aspect markers __te__, __tɛrɛ__, and __tun__ and the adverbial
morphemes is that both are used to form the conditional as-
pect when combined with the future tense/aspect marker. In
Worodugukan, the conditional is __te ya__, in Maninka __tɛrɛdi__, and
in Kuranko, the conditional is formed by combining __si__, the
future, with __nun__ at the end of the sentence: e.g., Kuranko:
__a si ta sui nun, kono a ma ta__, "She was going to go to town,
but she didn't go".

These are the tense/aspect markers in the various Mand-
ing dialects for which data is available. Worodugukan main-
tains aspectual distinctions that are not present in some
of the other varieties. The same, however, could probably be
said for many of the dialects for which data has not yet
been made available. Perhaps the most distinctive feature of
the tense/aspect marker system of Worodugukan is the tendency
to place the negative copula at the beginning of a complex
tense/aspect marker to form a negative, rather than having
the marker replace an affirmative marker. When all things are
considered, however, the Worodugukan system is well within

the general Manding system.

IV. CONCLUSION

The morphology and syntax of Worodugukan are as conservative as the phonology and tone are innovative vis-à-vis other Manding varieties. The structure of Worodugukan noun phrases and verb phrases is virtually identical to their respective counterparts in other dialects, although the underlying similarity often is less apparent in terms of surface representation. The repertoire of basic sentence patterns in Worodugukan is also identical to those of other Manding dialects.

The phonology and tone structure of Worodugukan, however, are different from those systems in other Manding dialects to the extent that communication is impeded. The differences are of a specific nature. Worodugukan has undergone some phonological changes which create new phonemes, and there are additional morphophonemic and morphotonemic rules present in Worodugukan. Some of the phonological changes - the forming of affricates from stops and the palatalization of fricatives - are not peculiar to Worodugukan alone, but in Worodugukan these changes seem to have taken place to a greater extent than in most Manding dialects. Others, such as the deletion of sonorants and the fronting of rounded vowels, appear to be restricted to the Koyaga dialects. These morphophonemic rules carry the surface representation of Worodugukan further from the underlying structure than is the case for more conservative Manding dialects.

115.

The above observations suggest a number of tentative hypotheses about the nature of the relationship between dialects in a dialect complex. The first of these concerns the criterion of mutual intelligibility to determine whether two varieties are dialects of the same language or of the same complex. In the case of Worodugukan, the percentage of cognates with other Manding dialects is quite high. Furthermore, the underlying morphosyntactic structure of Worodugukan is virtually identical to those of other Manding dialects. It would seem that the relationship between Worodugukan and other Manding dialects is quite close; the fact that speakers of other varieties report great difficulty in understanding Worodugukan is better explained in terms of other factors than by assuming that Worodugukan is not a member of the same group as are mutually intelligible Manding dialects.

Wolff has demonstrated that non-linguistic factors may affect intelligibility (Wolff, 1964). He shows how attitudinal factors may create one-way intelligibility. It is possible, however, that the Worodugukan data may suggest a linguistic factor affecting intelligibility. Might it not be possible that Worodugukan speakers can understand more conservative dialects because their surface forms correspond to underlying forms in Worodugukan, but that, because Worodugukan forms are not similar to underlying forms in other varieties, Worodugukan is not easily understood? Perhaps it could be shown that whenever two dialects exist one of which has additional morphophonemic rules, there is one-way intelligibility. On

the other hand, the opposite relationship may hold in terms
of speech production. Worodugukan speakers, although they
understand other varieties well enough, speak them with great
interference, and they are often ridiculed. It may be that
whenever one variety has additional morphophonemic rules vis-
a-vis another, it is more difficult for a speaker of the dia-
lect with the additional rules to adjust his speech than visa
versa. It may be more difficult to unlearn a morphophonemic
rule than to learn one. These are, of course, speculations,
but empirical testing of such hypotheses might provide in-
sight into areas such as the learning of standard English by
speakers of non-standard dialects.

The relationship between Worodugukan and other varieties
also suggests certain limitations of the stammbaum model of
indicating historical relationships. It is true that Maninka,
Bambara, Eastern Dyula, and Worodugukan probably evolved from
a common ancestor. But it also seems to be true that they are
at different distances from Proto-Manding. A tree diagram such
as a. would not indicate that Bambara, Maninka, and Dyula are
more similar to what we would reconstruct as Proto-Manding
than is Worodugukan.

a. Proto-Manding

Worodugukan Mau Bambara Maninka Koyaga Dyula
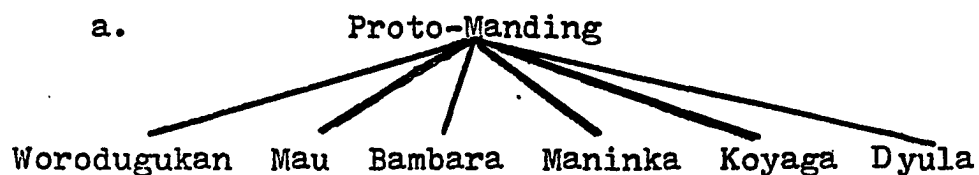
It is possible that further research into the other Koy-
aga varieties will provide justification for postulating a

Proto-Koyaga. The resulting diagram, **b.**, would at least suggest that Worodugukan is more evolved or has changed more than have other varieties:

b. 　　　　　　　Proto-Manding

Proto-Koyaga

Worodugukan　Mau　Koyaga　　　Bambara　Maninka　Eastern
　　　　　　　　　　　　　　　　　　　　　　　　　Dyula
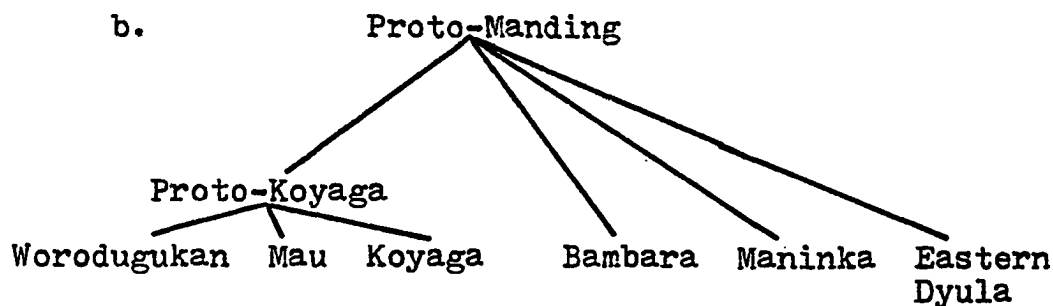
Worodugukan poses interesting problems in language relationships because it represents, apparently, a somewhat unique phenomenon within the Mande language family. It is a variety which has undergone rapid change at only one level - that of phonology. A variety such as Vai differs as greatly from Bambara and Maninka as does Worodugukan in terms of phonology, but it also has a much smaller percentage of cognates with them than Worodugukan has, and the grammar of Vai also shows greater difference. In Worodugukan, the tendency toward palatalization of consonants and the additional morphophonemic and morphotonemic rules have not been paralleled at the levels of syntax or lexicon.

More data from various Manding and Mande varieties is, of course, necessary. There are still far too few varieties for which adequate data exists, and this makes the work of the comparativist difficult. Further research will no doubt support some of the conclusions reached here, and it will just as surely disprove others. It is to be hoped that the descriptive parts of this study provide data for others to work with.

V. LEXICON

All entries are in morphophonemic transcription. Nominals are listed with the definite marker so that tone can be indicated. For nouns, tone markings are given only on the first syllable and the definite marker; the morphotonemic rules in Chapter III will convert this morphotonemic representation into the correct surface tones. It should be noted that, although the tone given for nominals and verbs is probably reasonably accurate, the complication of Worodugukan morphotonemics and the difficulty of finding frames by which to elicit tone make it difficult to ascertain with certainty the underlying tonal representation for items such as postpositions, tense/aspect markers, sentence adjectives, etc.

A

à	he
àlú	you (plural)
àlù	they
án	we

B

báó	river
bào	goat
bá-den-maó	kinsman (mother's side)

119.

ba-den-yao	fraternity
báblao	hat
baga-baga	to frighten
bágao	rice
bàgao	poison
baga-bɔo	breakfast
báganino	chair
bákano	amulet
baloo	food
baloo	chatter
balo-kɛ	to chatter
bálukuyao	age of puberty
bajõo	papaya
bamao	crocodile
bama-koyogo-nino	baby crocodile
ban	to refuse
ban	to finish
banao	sickness
bana-bao	leprosy
bana-baga-tɔo	sick person
banano	silk-cotton tree
basao	lizard
basio	couscous
basio	trouble
basio	sound
be	to go
be	to fall

béò	creeper trap
béaò	work
béa-kɛ	to work
béa-laó	worker
béa-tigìo	worker
bèaó	gourd
bèa-wɛnsɛó	porcupine
bèmebaó	leper
bén	to be just
bényɛŋɛ	to pound
bɛbɛó	pepper
bɛɛbɛɛ	good
bɛlanò	beetle
bɛnakaó	family
bìo	today
bíiò	small sack
bíɛ̃o	liver
bíɛo	spear
bínó	grass
bín-kɛ	to hunt
bín-kɛ-laó	hunter
bín-kɛnɛ-são	green snake
bóo	excrement
bo-daó	anus
bo-musó	bad woman
bòlaó	inn
bónó	house

bón-daò	door
bón-kóò	wall
bón-musóò	round house
bónya	to respect
bóò	hand and arm, extension
bó-beaó	right hand
bó-La-nɛgɛó	bracelet
bobóò	pigeon
bɔsɔó	ingrate
bɔ́	to leave, to remove
búgulìò	ashes
búyakió	guava
bùyakìò	mason
buò	bread
buó	horn
bwè (also, bwì)	to run
bwɛ́lɛ́o (also, bwɛ́ó)	sack
bwɔ́ò	bamboo
byɛ̃́ò	liver

Č

čé	to break, to strike
čè	to send
čéò	work
čenaò	skull
čɛ̀ó	man

čɛ́o	middle
čɛ́-si-lao	belt
čɛ̃́o	goods, inheritance
čiano	pea
čino	palm tree
čin-gbeao	bamboo palm
čógoo	way of doing
čógo-yao	means

D

dao	mouth, door
da-fruo	cheek
da-gban-kɔ̈-šeo	goatee
da-gbano	chin
da-gbö́o	lip
da-jeo	saliva
da-kɔ̈-sigio	assistant
dao	number
da-fɔ	to say the name of
dabao	ink
daba-jeo	ink
dabao	hoe
daba-kɛ-lao	farmer
dabii	to reverse, to turn over
dagao	pot
dalakao	yawn

dálaka-kɛ̀	to yawn
dàli	to pray
dàlulu	to have power
dàlu-yaò	power
dànanò	wall
dániò、	weaving
dèleò	robe, bubu
délió	pardon
dénò	child
dɛ́	to sway
dɛ̀gɛ	to learn
dì NP ma	to give to NP
dígiò	darkness
dòn	to enter
dóó	secret group
dòmiò	food
dòmi-kɛ̀	to eat
dòmin-kòla	around
dònió	baggage
dòninò	rooster
dònsoó	hunter
dɔ́	some
dɔ́gɔ	to eat
dɔ̀n	to dance
dɔ̀nɔ	to lend
dɔ́gbɛó	other
dùguó	land, ground

dùgu-ma-fɔnó	snake
dùgu-tigió	village chief
dulenó	hook
dùnunó	drum
dráo	lake
drɔ́o	beer

F

fà	to be empty
fà-tɔó	crazy person
fáo	father
fá-čɛo	father
fá-den-maó	kinsman (father's side)
fá-soò	town of origin
fàga	to kill, to die
fàganìo	cloth
fága-ndanó	pauper
fága-ndan-yaò	poverty
fàleò	thread of a woof
fánanó	fish type
fán-togoó	forge
fànya-fɔ-laó	liar
fàsea	to render tender
fánfeanó	side
féaò	bellows
féa (also, frá)	to tear

fèaó	swamp
féaó	body
fén-gwönò	spoiled thing
féalaó	orphan
féan-fasió	difference
fénò (also, fɔnò)	thing
fɛ	to exchange
fɛnò	an exchange
fɛ	to grow
fɛ	to look at
fɛnó	oath
fíio	error
fíio	type of couscous
fii (also, fri)	to throw, to err
fí-beaò	witch
fienó	blind man
fínaó	coal
finyaò	threshold
fisia (also, fisa)	better
fítiìo	twilight
flà	two
flà-nió	twin
flaò	medicine
flaò	Peul
flanó	person of same age-grade
flán-yaó	same age-ness
fléó	body

flonó	blind man
foloó	goiter
foloó	tendon
folonò	envelope, snake skin
fónoò	radio
fonò	small pox scar
fofoó	cake of banana and farina
fɔ́	to say, to play an instrument
fɔ̀nɔ	to vomit
frín-frinò	butterfly
fúò	sponge
fúgulaó	bonnet
fúnu	to inflate
fuò	trap
fuò	stomach
fǘ	to marry
fuó	marriage
fyɛ́nanó	mushroom

G

geaó	indigo
gènaó	spindle
góó	corn
gìndeó	tom-tom
gùn	to attack
gwówoó	banana

gbao	kitchen, food preparation
gba-kɛ	to cook
gbagbao (also, gbagao)	sorcerer
gbaganio	seat
gbano	sleeve
gbano	gumbo
gbansan	for nothing
gbanyano	foot bracelet
gbeo	sap
gbea	to do something suddenly
gbeano	toad, bandit
gbeano	granary
gbeano	sponge
gbeno	bed on the ground
gbɛnyɛo	whip
gbɛsɛo	tooth brush plant
gbasi	to strike
gbio	arrow
gbieo	road
gbiɛndɛ	to rub
gbigbi	to shiver
gbimino	sorcerer in form of an owl
gbin	to follow
gbo	sweet
gbongbono	bucket

gbóyonò	wild pig
gbóó	skin
gbɔ́gɔ́	corn
gbɔ́nò	ape
gbɔ̀ŋɔnaò	type of fruit
gbú	own
gbúò	sphere

H

hákɛó	sin
hákɛ-to	excuse me
háli	an intensifier
hɛ́raò	happiness
hóron-yaó	goodness

I

i	you (singular)

J

jàn	long
jàn	to grow thin
jaó	sweet one
já-tɔó	coward
jábaó	onion
jàbananó	henna

jàbibió	pineapple
jámaò	crowd
jáma	to speak in a loud voice
jámeanò	country, canton
jámió	name
jànfa	to betray
jànfaó	treason
jámüò	vagabond
jèabio (also, jàrabi)	love
jàte	respect, count
je (reflexive)	to be quiet
jéo	water
jé	to see
jé-keanó	
jéo	watermelon
jéabi	beloved
jéanò	spirit
jèsiẽ	Tuesday
jéte	to consider
jè	to lack
jé	to go up
jè	to come together
jèó	group
jéó	place
jé-kè	to forget
jèmè	to help
jénèó	tom-tom

jɛsɛ	to scratch
jɛ̀	to accept
jɛ́	to grill
jìó	silence
jíió	tree
jíi-məgə-ninó	statuette, mask
jii-guno	log
jìeó	griot
jíembeó	great drum
jíɛò	laugh
jìɛ̃ó (also, jìã̃ó)	hole
jìgi	to descend
jón-Lé	who
jóó	reason
jòó	fetish
jo-kunó	mask, gris-gris
jò-tigiò	fetisher
jòhwaó	cat
jòsi	to dry
jɔ̀nó	slave
jɔ́sɔó	palissade
joo	fur or feathers
joo	wound
jòn-Lé	which
júsoó	heart, character
júó	posterior
jú-kɛ	to copulate

jú-kɛ-lìo	sexual intercourse
jú-kuno	buttock
júguo	evil
júrumuo	sin
juo	rope

K

ka	tense/aspect marker
kabao	cloud
kabao	ringworm
kabao	rock
kaba-koo	astonishing thing
kablao	clan
kabenio	boy
kaboo	tomb
kalakala	to stroll
kaloo	moon, month
kaminó (also, gaminó)	guinea hen
kan	to be equal
kano	neck, voice, throat
kan-yiao	hole of the neck
kan-La-kono	necklace
kanano	type of iguana
kangbao	sickness
kangɛbao	shroud
kanyano	trap

kàsaó	smell
kàsa	to bother
kàsea	to curse
kàseaò	curse
kàsi	to cry
kàsien	to count
kàyaó	testicles
kéaó	sleeve, forearm
kéaó	hot water
kèa	to flow
kéaò	stem of feather
kéa	to sew
kéa-Li-kὲ	to sew
kéa-Lao	needle
kéanò	fish trap
kéanò	bow
kèan	to study, to read
kèan-Li-kὲ	to read
kèan-mɔgɔó	koranic master
kèan-mɔgɔ-denó	koranic student
kébeò	act
kènya	to adjust
kέ	to make, to do
kέkoyaó	muzzle of a dog
kέnε	healthy, green
kέnε-yaó	health
kέnεó	red sorghum

kéninò	cheeks
kễo (also, kiẽ́o)	light
kíen	one
kíeteó	snail
kie-yaò	jealousy
kiɛo	also
kiɛó	war
kiɛ̃-denó	warrior
kiɛ̃-dɔnó	dance of initiation
kiɛ-kiɛo	type of ant
kiɛ-kiɛo	pepper
kiefaó	confided thing
kiɛnò	circumcision
kilasio	five francs
kií	to call
kii-laó	name
kiio´	egg
kítiò	judgment
kiti-kɛ-jeaó	judgment
kíti-tɛgɛ-laò	judge
kló-kloò	turkey
klwanò	wooden plate
klwanaò	koran
klwaninò	pigeon of the village
klwan-yaó	bitterness
koò	business, thing, affair
ko-jũ	intensifier meaning, "very much"

kó-lon-beaó	know-nothing
kóko-yaó	custom
kómaó	word
kóngoó	forest
óngo-wüò	wolf
kònʊsu	to lie
kónyaò	rat
kòso	because of
kósoó	wool cover
kö̋ó	tense/aspect marker
kö̋nó	cowrie
kö̋nò	bead
kö̀ɔó	truth
kö̋ɔ́	old
kö̋ɔ́	under
kö̀ɔ-baó	big bird (turkey)
kɔ́gɔɔ́	side
kɔ̀gɔɔ́	salt
kɔ̀gɔ-jeò	sea
kɔ̀kɔtiò	pig
kɔ́ni	but
kɔ́ninó	guitar
kɔ́nin-fɔ-laó	guitar player
kɔ́ŋɔò	hunger
kùgbenó	rat
kùmu	to be bitter
kùnó	head

kùn-a-diò	lucky person
kùn-a-gboò	unlucky person
kùn-ndano'	without reason person
kúnfɛtaó	madman, adventurer
kúnwɔ̀	yesterday
kúsìò	pants
kuo'	mountain
kwòo'	bone
kwòo'	habit
kwɔ̀ò	pearl
kyɛ́ó	palaver, talk

L

là	nothing
là-kɛ-beaø	vagabond
la'	to sleep
lá-fɔno	bed
laó	day
làbɛninó	reunion, meeting
làdaò	custom
láka	to open
lákolió	school
lákoli-denò	student
lákoli-den-tigió	teacher
làli	to advise
láno'	cover

làwa	Wednesday
làyìo	promise
làyita	to make a promise
lèbùo	shame
lèbu	to shame
lɛ̀ó	pig
lɛ́nò	horsefly
lì	to shave
líó	bed
líó	honey
lí-denó	bee
lílìno	root
límamúo	imam
lìme-yaó	friendship
lógo-logo	to amputate
lóloó	star
lómùò	lemon
lómu-bào	orange
lónó	day
lón	to know
lón-Li-bagào	scholar
lónanó	stranger
lɔ́ó	length
lɔ́	to stand
lɔ́ɔ́	desire
lɔ̀-kɛ̀	to braid, to twist
lɔ̀bɛ	to welcome

lɔ́gɔɔ́	market
lɔ̀gɔ-kunɔ̀	week
lɔ́gɔ̀o	wood faggot
lúὸ	court
lúluὸ	diamond
lὺ (also, lὺ̈)	plural marker

L

La´	on
Lé	emphatic particle
Lí	nominalizer of verbs before kɛ
Lɔ́ (also, Lɔ̈)	it's a...

M

má	mother
ma´	tense/aspect marker
má	on
mábió	automobile
màga	soft, supple
màga-ya-ninὸ	something soft
mákɛὸ	pity
màkoó	need
màkobaga	protection
máloó	rice
man´	tense/aspect marker
mándenó	a Manding

mánden-jameào	Manding empire (Mali empire)
màdiɲi	to wound
màjaó	struggle
mándonó	disciple
màndɔgɔó	type of fish
mánɛgɛ	to pretend
mányào	army ant
mánjeó	papaya
màsa-čɛò	chief
mášwaò	catastrophe
màyaó	shame
mèafaó	gun
mèafa-gu-ninò	pistol
mèatió	leper
m̃ɛó	hippopotamus
mìn-Le	what
mísa	Thursday
mé	yet, still
mèa-mea	to sparkle
méama-feǹo	dangerous thing
méanoǹò	rubber
mɛkonó	barrel
mɛmɛò	ant
mɛn	to extend
mɛ̀n	to understand
mìn	to drink
mìla	to trap

NP la mɔ̀	to bring up
mɔ̀gɔó	person
mɔ̀gɔ-nin-finó	human being
mɔ̃̀o	old person (used as term of respect)
múguó	powder
mùsoó	woman
muʺó	knife
mwéo	marabout

N

nà	to come
náo	sauce
ná-bruó	clear sauce
nábunà̀o	leaf
náfʺoó	riches
náfʺo-tigió	rich man
náganaó (also, nánaó)	owl
nánaó	mason
nàŋanào	swallow
nɛ̀gɛ	to deceive
nɛ̀gɛó	iron
nɛ̀gɛ-soó	bicycle
nɛ́nɛó	cold
nì	and
níaó	rat
nímuó	thing

nínseaó	tax
níɲinào	leaf
nìsió	bovine
nógoò	stomach
nógobào	intestines
nɔ́ɔ̀	track
nɔ́gɔó	article
nɔ̀mɔ	to sit
nɔ̀mɔ-jeaó	seat
nɔ́mɔ̀nò	creeper
nɔ̀nsió	chameleon
nšeaǹo	tobacco
nšea-mugùo	tobacco powder
nuguo	part of forehead, top of head
ńunó	nose
nuń-yaó	nostril
núɲuó	blacksmith
nùn-čɛó	blacksmith
nẁamió	rice cake
nwɛ́ò	thorn
nyào	face, eye
nyá-jeò	tear
nyá-mɔgɔ-deǹo	bastard
nyá-mɔgɔ-yà	bastardly
nyá	to forget
nyà	suffix to make ordinal numbers
nyɛ́-denó	tongue

nyέ-maò	food
nyɛnɛnɛ	to horrify
nyέŋɛnɛo	urine
nyínó	tooth
nyɔó	grain
nyɔ́gɔ	each other
nyɔ́nyɔ (reflexive)	to rest
nyɔ́ŋɔmɛò	camel

φ

φéó	palissade
φɛlέó	loom
φɛ́-fɔ	to criticize
φɛ́-fɔ-Lió	criticism
φò	to greet
φò	to wash
φɔ́ò	back
φɔ́-köò	spinal cord
φɔ́-kiiò	hump of a hunchback
φɔ̀ó	origin, river
φɔ́nɛó	steam, heat
φúó	yam

S

sa	to die
sába	three

sàbeaó	sandal
sàgaó	sheep
NP la saga	to conserve
sákeaò	trap
sáleno	tomb
sàmaó	elephant
sàn	to buy
sànó	year
sánó	sky
san-jeó	rain
san-ma-jiaò	ceiling
san-gbe-maò	thunder
san-gbe-ma-kɛ̃ò	lightning
sànino	rabbit
san-seaó	roof
san-seano	broom
sàsaó	fever
sásoò	a cold
sàsö	to pound
sã̀	to peel
sã̀o	snake
sã́flaò	soap
sé	to be able, to reach
sé-koó	something one can do
sé-yaó	power
séaaò	sacrifice
séaó	peanut

séa-nào	peanut sauce
séa-gbɛnào	white peanut
sénò	foot
sɛ́bɛ	to write
sɛ́bɛo	paper
sɛ̀gɛ	to be tired
NP ma sɛ̀gɛ	to bother
sɛ́mɛó	marrow
sɛ́tiò	chair
sɛ̃́ó	field
sɛ̃́-ke-laó	farmer
sɛ́lɛó	witness
si	no, none
sio	fly
siió	race
siaó	family name
sie	to pray
sie-bӧó	mosque
siebaó	young woman
siɛkiió	chicken egg
sìgi	to sit
sìgio	buffalo
sino	breast
sìna-yaó	rivalry
síngbió	young woman
sínyaó	time
sínyio	story

sínkuɔbuó	riddle
sínla-laó	story teller
sísa	to drown
sísió	chest
sìsɛó	chicken
sòó	thief
sóó	village, town
só-ɸɛ̃nò	parrot
sògoó	meat, animal
sónió	to facilitate
sósoò	mosquito
soo	waist
sonó	rust
sonó	future
sòn	to accept
sónò	antelope
sònyuŋuó	glutton
sɔsɔó	bean
sɔ	to find, to get, to learn
súó	corpse
súò	night
súanò	fufu
súkuò	manioc
súmaò	food
súnò	plant, tree
súman-dɔgɔ-sã̀o	time for eating
syunò	hyena

sùnogoɔ́	sleep

Š̌

šeaó	street
šea-feanó	crossroads
šea-yaó	sickness
šea-baò	leprosy
NP la šeán	to frighten
šeleó	flower
šɛ̀	to strike
šoó	small pox
šile (also, fyile)	to sell
šɛ̀ (also, fyɛ)	calabasse
šóò	horse
šoaò	copper
šoao	monkey
sɔmaó	puberty
sɔnó	future

T

tà	to take
táó	fire
ta-suó	brushfire
tabeó	table
taga	to go
taleǹò	spider

tálen-bào	type of spider
tàlenó	riddle
támaó	piece of money
tàmaó	lance
támbaò	shea butter
téaó	steam, heat, sweat
tɛ́	tense/aspect marker (negative)
tɛ́gɛó	palm of hand
tíalaó	prophet
tíɛ-čɛó	friend (male)
tíɛ-musoó	friend (female)
tìgio´	master, owner
tígininò	grass skirt
tínim-baó	mountain
tíɲininò	electric fish
tísio´	sneeze
tóo´	to (a food made from cassava)
tòbiò	food preparation
tòbi-kɛ̀	to cook
tógolaò	shelter, roofed porch
tólìò	frog
tóɲonò	termite hill
tòtoó	rat
t"óò	ear
t"onò	fun
t"ɔ́ɔ̀	hardship
t̀ɔ"	(a predicator)

tɔɔ́	rest, remainder
tɔgbɛ̀o (also, tɔgbɛ̀no)	left hand
tɔ́gɔɔ́	name
tɔ́gɔɔ́	side
tɔ́gɔ-janò	long bubu
tɔ̀gɔ-tɔ̀gɔ-ninò	diarrhea
tɔ́nò	cricket
tɔ̀nó	association
tɔ́ngɔnɔɔ́	duck
tú	to pound
túbabùo	white man, European
tùgba	to pull
túgu NP La	to touch
tùo	oil
tú-gbɛó	shea oil

W

wàka	to dismount
wànseó	crab
wàso	to brag about
wàtìo	time
wáawaa	to fall in love
wɛ́	to finish
wɛ̀o	money
wɛ̀juò	great marabout
wɛ̀juò	jump
wɛ̀jɔ̀	

wɛ́nsɛó	jackal
wɛ́sɛó	potato
wíaò	lie
wóò	opening
wò	to shell
wó	to give birth
wó-ba-tɔó	new born child
wóó	birth
wóò	kola
wònó	chimpanzee
wònò	valley
wɔ́ò	thigh
wɔ́yɔ̀ò	noise
wúsùò	steamed rice
wúsu	to steam

Y

yá	(tense/aspect marker)
yé	(tense/aspect marker)
yɛ́	(tense/aspect marker)
yɛ́ò	cheek
yɛ̀-man	to change
yàn	here

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