A LINGUISTIC ANALYSIS OF GURMA

by

ELEANOR BECKETT

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April, 1974
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Department of Linguistics
The University of British Columbia
Vancouver 8, Canada

Date April 8, 1974
ABSTRACT

This thesis presents a linguistic description of Gurma nouns and verbs based on the Fada N'Gurma dialect.

The first chapter introduces the Gurmas to the reader and tells about the first writings in and about their language.

Chapter two presents a phonetic and phonemic analysis of the language.

Chapter three defines the noun, presents the noun classes, and shows how tonal patterns divide the noun classes into sub-sets. It shows the pronouns which are in concord with the noun classes as well as the sub-set of personal pronouns. It then shows how tonal patterns change when nouns or pronouns are used in negative, relative and possessive constructions.

Chapter four defines the verb and shows its inflections by means of tonal change, addition, deletion, replacement and suppletion. It then presents the verbal particles and shows their use.

In chapter five a Gurma sentence is analysed to shown nominal and verbal morphemes in an authentic Gurma setting.

The thesis is concluded with a bibliography and two appendixes, the first a brief report on work being done in the currently popular field of ideophones, the second an account of references made to the Gurma language before the twentieth century.

The two maps following, page ii, show the location of Gurma in relation to Greenberg's language families of Africa, and in relation to Gurma's immediate language neighbours.
Greenberg's Language Families of Africa

<table>
<thead>
<tr>
<th>Afro-Asiatic</th>
<th>Nilo-Saharan</th>
<th>Niger-Congo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hausa</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Aspect marked by deletion ± tonal change

Aspect marked by replacement ± tonal change

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ACKNOWLEDGEMENTS

In presenting this thesis the writer acknowledges her debt to Mrs. Jean Hume and other fellow missionaries, to the Reverend André Prost and his confrères, and especially to Monsieur Alhassane Lampo and other Gurma colleagues.

None of these was the first to write Gurma, that was probably done by C. G. A. Oldendorp who recorded "numerals, thirteen nouns and one sentence" in Gurma in 1777. None of these made the first extensive Gurma word lists, that was done by S. W. Koelle and included in his monumental Polyglotta Africana in 1854.

But Mrs. Jean Hume first discovered Gurma's twenty noun classes and the basic principles of its grammar. The Reverend Monsieur Prost's great contribution to Gurma has been in editing with the Reverend Alphonse Chantoux, the comprehensive Grammaire gourmantché compiled by the Reverend Alexandre Gontier.

The concern of Monsieur Alhassane Lampo, Bible translating colleague of the writer of many years, that the features of vowel length and labialization so common to Gurma be consistently indicated was partly responsible for Dr. W. E. Welmers' spending a few days at Fada N'Gurma. He was invited to come to help with the orthography problems. Having advised us on these he suggested that we find out how tone worked in Gurma. This thesis is largely the result of that research.

When Lampo began whistling tones for the writer, even he had no idea of the tonal patterns of his own language. But his keen insights into his language (sharpened no doubt by the fact that he speaks Môôré
and Fulani fluently and can 'se débrouiller' in Haussa and Djerma),
his willingness to share his knowledge, and his patience in the inevit­
able checking and rechecking of data have resulted in the present re­
cording of some of Gurma's tonal patterns. Lampo's contribution to
this, with that of several other Gurma colleagues has been invaluable.

The writer wishes to record her gratitude to Dr. R. J. Gregg
and to Dr. M. D. Kinkade for their gracious, patient, kindly encour­
gagement as they have directed her work.

And she wishes especially to give thanks to God for bringing her
to know the Gurma people and work in their language.
... οὐδὲν ἄφωνον ... 
1 Cor. 14: 10

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Introduction

Gurma is a West African language. Professor John Bendor-Samuel says of it with its neighbouring language Mɔɔrë, "This sub-group comprises the core of the central group of the whole Gur family."

Delafosse suggests that the root gur may have been first brought from Africa by the Carthaginian explorer Hannon at least five hundred years before Christ: "L'unique mot rapporté par le carthaginois Hannon de son voyage à la côte occidentale d' Afrique ne nous est connu que par l'incertaine transcription dont nous avons tiré le nom du "gorille"; on en pourrait seulement rapprocher la racine gor, kor, ou gur, signifiant "homme" dans plusieurs langues actuelles du bas Sénégal."


2Grand Dictionnaire universel du XIX siècle, 1873, s.v. Hannon. "... navigateur carthaginois qui vivait à une époque incertaine. On possède de lui un Péricl e ou relation d'un voyage sur la côte O. d'Afrique, qu'il exécuta l'an 1000 avant J. -C. suivant les uns, en 500 suivant d'autres. Cet ouvrage, écrit originairement en langue punique, ne nous est connu que par une traduction grecque, qui n'est peut-être qu'un extrait.

The Gurma People

Gurma is spoken by approximately a quarter of a million people who call themselves bigulimanceba. They are called Gurmas by English speakers, and les gourmantchés by the French. They live in the eastern area of the Upper Volta Republic, and in thebordering areas of the Niger and Dahomey Republics, and in northern Togo and Ghana.¹ They claim their descent from a chief who came from heaven on a charger with a maiden riding on the croup of his saddle. They point to a rocky "footprint" near Pama, a Gurma town just north of the Togo-Upper Volta border, as the place and proof of this descent.² Their neighbours to the west, the Móssis (language Móoré), who are the predominant race in Upper Volta and make up about three and a half million of the total population of five million, claim that a grandson of the founder of their empire established himself as an independent chief to the east of Mossi territory and so founded the Gurma race. European historians mention the Mossi and Gurma empires from the 13th Century onwards.³ Another tradition about Gurma origins investigated by the

¹ De Lavergne de Tressan, "Inventaire linguistique de l'A. O. F. et du Togo", Mémoires de l'Institut français d'Afrique noire (hereafter cited as IFAN), no. 30 (Dakar, 1953) p. 78.
Reverend A. Prost and P. Mercier has the Gurmas related to the male line of the chiefs of the Dagombas (language Dagbani, of the Gur family) in northern Ghana, and the Mossis also related to these chiefs, but by the female line. The Gurmas have never been successfully invaded or conquered by another African people. From 1900 to 1960, when Upper Volta became a republic, they were under French rule, a part of Afrique occidentale française. They continue to have close ties with France. 

The Gurma Language

Gurma has three dialects, Fada, eastern and northern. The Fada dialect has been considered the prestige dialect because Fada N'Gurma has been traditionally the seat of the paramount chief of the Gurmas and, more recently, up until the time of Independence, the French administrative centre for the Gurmas. It was for this reason that the Sudan Interior Mission chose the Fada dialect for Scripture translation.

The eastern differs from the Fada dialect in some of its noun class prefixes and concordant pronouns; e.g., it has a \text{\text{'ku - gu'}}\text{\ class, nominative pronoun 'ku', accusative 'gu', where Fada has an 'o/gu - gu' class, nominative pronoun 'o/gu', accusative 'gu; it has a 'ke - ga' class, nominative pronoun 'ke', accusative 'ga', where Fada has a}

\footnote{A. Prost, "Notes sur l'origine des Mossis," IFAN, 15, (1953), pp. 344 - 346.}

\footnote{Paul Mercier, IFAN, (1954), pp. 12 - 15.}
`gi - ga` class, nominative pronoun `gi`, accusative `ga`, and so on. But no important syntactic differences between these dialects have been observed and there are few lexical differences. Eastern readers have little trouble with materials written in Fada dialect.

The northern dialect differs from Fada dialect in the same way as the eastern with regard to prefixes and concordant pronouns. But where the suffixes in these classes are the same for Fada and eastern, the northern dialect has a `-g` often so implosive before a final back vowel (e.g., in the `ku - gu` class) that both are sometimes almost inaudible. Another characteristic of the northern dialect is the use of initial `/h-` where Fada and eastern use initial `/η-`, (northern uses `/-η-` before medial homorganic consonants just as Fada and eastern do). The northern dialect consistently uses an `-si` ending in verbs where Fada and eastern have `-di`. In counting, the northern and the eastern dialects prefix `n-` to numbers above one where Fada more readily uses `bi-`, (when counting articles all dialects use the concordant pronoun of the noun class of the articles involved). There are more lexical differences between northern and Fada than between eastern and Fada, but the outstanding differences are syntactic. The northern dialect constructs its relative clauses in a different manner from the other dialects, and makes more use of the noun prefix as a determinant. Fada speakers have great difficulty in understanding northerners, but northerners learn to read and hear the Fada dialect with very little trouble.
Early Study of the Gurma Language

The pioneer study of Gur languages was made by J. G. Christaller of the Basel Missionary Society. He first mentions Gurma in his Asante Grammar as "one of the languages spoken in the neighbourhood of...Mosi...a large country to the north of Asante...", and says he obtained the name Gurma from a former slave in 1858. In 1889 Christaller published a study giving thirty words in each of seventy-two languages, many of them Gur. He attributes this term, Gur, to his colleague, G. A. Krause, who wrote to him from Ouagadougou (the present capital of Upper Volta) while on a trip north of Asante territory in what is now northern Ghana and Upper Volta, the area where Gurma and related languages are spoken. Krause "suggested the use of the term Gur, derived from the names Gurma, Gurunsi, etc., of frequent occurrence among speakers of these languages" as a collective name for them.

1Johann Gotlieb Christaller, A Grammar of the Asante and Fante Languages Called Tshi (Chwee, Twi), (Basel, 1875), p. XV.


3J. Bendor-Samuel in "Niger-Congo, Gur", further lists these as Gurma, Guren, Guresha, Gurunsi, Guri, Liguri, and Guruba. p. 141.
This term, Gur, is now applied by English-speaking as well as German linguists to those related languages spoken in an area from about $8^\circ$ north to $14^\circ$ north of the Equator, and from about $7^\circ$ west to $4^\circ$ east of the Greenwich time line. Much of this area has been under French influence, and in 1911 the first French director of the International African Institute, IAI, Delafosse, published *Les Langues voltaïques (boucle du Niger)*. Thus he introduced the name *voltaïque* (or Voltaic), to refer to this group of languages spoken in an area which might also be loosely defined as the upper basin of the Volta river and its tributaries. French linguists generally use the term *voltaïque* where English linguists use the term Gur in referring to these peoples and languages.

In 1927 Westermann classified the languages west of Lake Chad as West Sudanic (versus Central and Eastern Sudanic). He pointed out strong lexical resemblances to the Bantu languages whose distinguishing characteristic, the noun class prefixes, is analogous to the noun class affixes of many of these languages.

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More Recent Study of the Gurma Language

In 1949 - 50 Professor Greenberg, using Westermann's evidence, included Bantu with West Sudanic,¹ and called all by a new name, the Niger-Congo family of languages.² The Western or Niger branch of this family included the members of West Sudanic formerly postulated by Westermann, i.e., West Atlantic, Mande, Gur (or Voltaic) and Kwa, and also included Fulani (or Peuhl) in West Atlantic. This is of interest to a study of Gurma because the Fulani language, that of the "cattle people" bordering Gurma on the north and spoken by thousands of

¹Meinhoff and Delafosse had already suggested this; Delafosse, "Les Langues du Soudan et de la Guinée," Les Langues du monde, (Paris, 1924) had said:

This distinction between Bantu languages and Sudanic languages is not absolute. Both of them as far as it is possible to give an opinion on languages whose origin and historical development we do not know, seem to belong to a single linguistic family. By the most characteristic points of their morphology and their syntax, by the totality of the phonetic laws which govern them, by the formative elements of their vocabulary they show such affinities that it appears difficult to dissociate them.


Fulani living throughout Gurma territory, had previously been classi­

cified as Hamitic (and thus in a family unrelated to Gurma) by Meinhoff.¹

Westermann had included Fulani in the Gur family but he had termed it
"isolated".

In 1963 Professor Greenberg published The Languages of Africa.²

In this work, emphasizing cognate vocabulary, he attempts to show that
all indigenous languages of Africa may be assigned to one of four lan­
guage families. These are: Niger-Kordofanian, Afroasiatic, Nilo-Saharan
and Khoisan³. This latest proposed grouping is also of great interest

¹ Meinhoff, Sprachen der Hamiten, (Hamburg, 1912).


³ Professor M. Guthrie, reviewing Languages of Africa for the Journal of African History, 11: 1962, pp. 135-136, strongly opposed
Greenberg's classifying of Bantu with the West Sudanic languages, i.e.,
Gur, Kwa, etc., on the grounds that his criterion of common vocabulary
is insufficient to establish the existence of genetic relationship, that
"the regular phonologic development from a common origin must be shown"
(quoting Greenberg himself), and that Greenberg makes no attempt to do
this. D. Westermann discusses the same points more sympathetically in
his review of Greenberg's earlier work "Studies in African Linguistic
Classification", in Africa 22, (1952), pp. 250-256. See also David Dalby,
"Reflections on the Classification of African Languages," African
Language Studies, no. XI. (1971).
to a study of Gurma because, if it is valid, the Gurma language has on her immediate borders languages representing three of the four families of African languages; only the fourth, Khoisan, not being in any close contact with Gurma speakers.

The languages which border on Gurma, starting from the west and moving clock-wise, are:

1. Mōōré, spoken by the Mossis (west), classified by Greenberg as Niger-Kordofanian.
2. Fulani, (north-west), Niger-Kordofanian.
3. Songhai and its trade language Djerma (north and North east), Nilo-Saharan.
4. Hausa, which is north-east and east of Djerma but so infiltrates the territory as to be almost a neighbour to Gurma, Afroasiatic.
5. Bargu or Bariba (east and south east), Niger-Kordofanian.

Greenberg divides the Niger branch of Niger-Kordofanian into six sub-branches; these are, west to east, West Atlantic, Mande, Gur, Kwa, Benue-Congo, and Adamawa-Eastern. Of the languages listed above as bordering on Gurma and belonging with it to the Niger-Kordofanian family, Fulani belongs to the West Atlantic sub-branch; the rest, Mōōré, Bargu, Berba, Migangam, Moba, Kusal and Gurma itself belong to the Gur sub-branch.

Professor Bendor-Samuel suggests the following main groupings within the Gur sub-branch (Gurma being in the first grouping):

\[\text{J. Bendor-Samuel in "Niger-Congo, Gur" pp. 143-145.}\]
1 Central Gur  
2 Bargu (or Bariba)  
3 Lobiri  
4 Bwamu  
5 Kulango  
6 Kirma-Tyurama  
7 Win  
8 Senufo  
9 Seme  
10 Dogon

He further suggests dividing Central Gur into:

1.1 Mōōrē\(^1\) - Gurma, 1.2 Tamari, 1.3 Grusi.

Of Mōōrē - Gurma he says, "This sub-group comprises the core of the central group of the whole Gur family. Within the sub-group four main division, Western, Central, North-eastern, Eastern and three further subdivisions are clearly established." He lists the members of the eastern group as:

"Bimoba
Basari-Kasele\(^2\) - Chamba (Tobote)
Konkomba
Gangam (Dye)
Gurma"

---

\(^1\) The Reverend Gustave Alexandre considers this long nasalized /o/ as "nasale propre au mōōrē (sic)" and distinguishes it from "les nasales françaises". La Langue mōōrē, Mémoires, (IFAN, 1953), 34:15.

\(^2\) Perhaps Oldendorp's Kassente, see appendix 2, pp. 135.
Westermann included Berba, Gurma's most easterly neighbour to the south, with this eastern group; Bendor-Samuel considers it uncertain whether Berba should be classed as Eastern or Northeastern. He classes Kusal, Gurma's westerly southern neighbour, as Central (north-central), thus recognizing its affinity with Dagbana (mentioned above, p. 3).

In 1929 the Sudan Interior Mission (S. I. M.) sent the Reverend Douglas Hume and Mrs. Hume to Fada N'Gurma. They had previously worked under a Brethren Mission among the Bantus. They found the Gurmas totally unlettered, and worked out the alphabet which, with slight modifications, is still used. They set to work to translate the New Testament into Gurma and to provide reading and writing-learning materials for Gurmas. When they retired in the 1940's they left a Gurma grammar and dictionary (unpublished) and the manuscript of a translation of Matthew through 1 Corinthians. The Mission Press in Jos, Nigeria, printed their Gospel of John in 1948. Early in the 1950's the Bible Society printed their Mark, then Matthew through 1 Corinthians. The rest of the New Testament was being translated, and in 1958 the Bible Society published all of it. About two thirds of the Old Testament is now translated and circulated in mimeographed form in preparation for printing by the Bible Society. The Society wishes to print and bind this with a new translation of the New Testament as soon as possible.

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2 Tidiedo Jesu Kilisiti TiCandaano yanantaadi-paano (Le Nouveau Testament en langue gourmantché (Gourma), (La Société Biblique, Paris, 1958).
The Roman Catholic Mission was established in Fada N' Gurma in 1931. To date only the two Missions have interested themselves in linguistic work in Gurma.

In 1951 the Reverend M. Chazal's French-Gurma dictionary was mimeographed by IFAN. In 1954 another priest, the Reverend Alphonse Chantoux, completed a Gurma grammar, a Gurma dictionary, and a collection of fifty Gurma tales. These seem to be partly in northern dialect and partly in Fada dialect (e.g., both ng and h are used for /ŋ/). This material was also mimeographed by IFAN. The Reverend Alexandre Gontier collected linguistic materials in the Kantchéri dialect (which seems to be a mixture of northern and eastern) which were edited by Chantoux and Prost who has contributed so much to the knowledge of Gur languages. (Prost has published grammars of Moba, Migangam, Tamari, Lambda, Naudem and Degara, and many articles on these and other languages). This study, entitled Grammaire gourmantché, was published by IFAN in 1968. In 1972 the Reverend P. Bonny completed a translation of the New Testament in the northern dialect. This was privately published in a beautiful volume, unfortunately too costly for general use. The Roman Catholic Mission has used the S. I. M. translation of Scriptures to date. Bonny is now engaged in adapting his northern dialect New Testament to Fada dialect.

*Kantchéri is a Gurma town in the eastern Gurma area.*


*Initiations et études africaines no. XXIII. Dalsar: IFAN (1968).*
Purpose of this study.

One can only feel great respect, admiration and gratitude for the work of all those who have written about the Gurma language. The purpose of this study is to describe scientifically the phonology and morphology of Gurma giving needed emphasis to the aspects of vowel length and degrees of labialization, and the importance of tone.
Symbolization

As far as possible the symbols of the International Phonetic Alphabet have been used. See the following table, page 15.

Stress is indicated by \(^{[\dagger]}\) before the stressed syllable.

Tone is indicated as follows: very high \(\[",\) High \(\[',\) mid \(\[\), low \(\[\), very low \(\[",\) a rising glide \(\[\), a falling glide \(\[\).

The symbol \([\gamma]\) is used for the yod which leaves the symbol \([\iota]\) free for the voiced palatal stop\(^1\) matching the symbol \([\gamma]\) which is used for the voiceless palatal stop. The flap \([\delta]\) is written \([\delta]\); and the implosive \([\gamma]\) is written \([\delta]\)\(^2\). Ligatures show the synchronic articulation of the labio-velar stops: \([K\delta], [G\delta], [\delta\eta]\). Where the vowel \([\iota]\) is followed by \([\alpha]\) or \([\varepsilon]\) this is to be understood as the on-glide of a rising diphthong, \([i\dot{\nu}]\); \([\iota]\) here implying also palatalization of the preceding consonant.\(^3\)

Similarly when the vowels \([o]\) and \([u]\) are followed by \([\varepsilon], [\nu]\], or \([o]\), these combinations too are to be understood as rising diphthongs \([o\nu]\), and \([u\nu]\), the \([\nu]\) implying labialization in a lesser and the \([\nu]\) in a greater degree.\(^3\)


\(^2\)The African Institute recommends writing the implosive \([\gamma]\) as \(^[\gamma]\), but preceding \(^[\dagger]\) is here kept for stress as the I. P. A. recommends.

\(^3\)i.e. \([\iota\alpha],[\iota\alpha],[\iota\varepsilon],[\iota\nu],[\iota\nu],[\iota\nu],[\iota\varepsilon].\)
### Table 1: Phonetie Table of Guma Sounds

MARTIN S. O. S.

All vowels are nasalised if followed or preceded by a nasal.

<table>
<thead>
<tr>
<th>Front</th>
<th>Central</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN</td>
<td>CLOSE</td>
<td>Half-</td>
</tr>
<tr>
<td>I 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plain</td>
<td>Palatalized</td>
<td>Plain</td>
</tr>
<tr>
<td>Plain</td>
<td>Palatalized</td>
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<td>Plain</td>
<td>Palatalized</td>
<td>Plain</td>
</tr>
<tr>
<td>Plain</td>
<td>Palatalized</td>
<td>Plain</td>
</tr>
</tbody>
</table>

CONSONANTS
Description of Gurma Vowels, (see the list of Gurma vowels, page 17.)

No. 1 [i] is a short, tense, close, front vowel with some lip spreading. It is less tense and less close and has less lip spreading than the French vowel in \( \text{si} \); it is more like the English vowel in \text{sea}, but is not diphthongized. It occurs in such words as:

1. \( \text{i} \text{tāmī} \) (the horses)
2. \( \text{i} \text{sānī} \) (the paths)

and in such forms as:

1. \( \text{o} \text{nādī} \) (he has washed his hands)
2. \( \text{o} \text{cōgī} \) (he is reading)

The lengthened version of this vowel, \( [i:] \), is not diphthongized either. It occurs in such words as:

1. \( \text{i} \text{tīdī} \) (the trees)
2. \( \text{o} \text{cīnō} \) (the cross cousin)

and in such forms as:

1. \( \text{o} \text{fīdī} \) (he has lifted the edge)
2. \( \text{o} \text{nīdī} \) (he has whined about it)

No. 2 \( \text{[ì]} \) is a short, lax, close, front vowel, the tongue being somewhat lowered and retracted from the position for \( [i] \); the lips are less spread. This vowel sounds occurs in words like:

1. \( \text{gōbīgō} \) (the child)
2. \( \text{mu\text{si̇}mēr} \) (the blood)

and in such forms as:

1. \( \text{o} \text{pīdī} \) (he has swept)
2. \( \text{o} \text{li̇bītī} \) (he has set it down upside down)
Complete list of Gurma vowel sounds.

1. \([i / i']\)
2. \([i]\)
3. \([e / e']\)
4. \([ɛ / ɛ']\)
5. \([a / a']\)
6. \([o / o']\)
7. \([ə]\)
8. \([u / u']\)
9. \([\text{Diphthongs}]\)

10. No. 1 + No. 5 \([iə]\)
11. No. 1 + No. 3 \([iɛ]\)
12. No. 8 + No. 6 \([oʊ]\)
13. No. 8 + No. 4 \([ɔɛ]\)
14. No. 9 + No. 6 \([ʊɚ]\)
15. No. 9 + No. 8 \([ʊo]\)
16. No. 5 + No. 1 \([ ai]\)
No. 3 [e] is a short, tense, half-close, front vowel with some lip spreading, but less tense and less close than the French vowel in 'été'. It would resemble the English vowel in sate if the latter were not diphthongized. It occurs in words like:

1. o'c'ebeb (the soap)
2. g'ly'eg (the calabash)

and in such forms as:

1. o'tiegi (he is just)
2. o'pi'ebi (he has sounded a note - on a flute)

No. 4 [ε] is a short, lax, half-open, front vowel; it resembles the English vowel in let. It occurs in such words as:

1. li'w (the snakes)
2. li'p (the sheep)

and in such forms as:

1. o'pendi (he has gone by)
2. o'gbeqi (he is fat)

The lengthened version of this vowel, [ε'], occurs infrequently:

1. be' (what? - said in scorn, disbelief, surprise)
2. o'ke'li (he has remonstrated - clucked as does a gecko)

No. 5 [a] is a short, lax, open front vowel. It occurs in such words as:

1. a'pala (the granaries)
2. li'pali (the granary)
and in such forms as:

1. ọl'bandị (he has learned)
2. ọl'cädị (he has washed)

The lengthened version of this vowel, \[a\acute{}\], occurs without diphthongization in such words as:

1. ọl'ta·mó (the horse)
2. ọl'omá·mó (the monkey)

and in such forms as:

1. ọl'fá'ní (he is washing his face)
2. ọl'gà'lí (he is blessing them)

No. 6 [a] is a short, open, back, generally slightly rounded vowel. It occurs in such words as:

1. ọl'joro'mó (the blind man) 2. ọl'pgólí (the red hot metal)

and in such forms as:

1. ọl'dogóldì (it's sufficient)
2. ọl'fogóglì (it's a long way)

The lengthened version of this vowel, \[a\acute{}\], occurs in such words as:

1. ọl'wó'dì (the cold, the cold season)
2. ọl'wó'limé (the indiscretion)

and in such forms as:

1. ọl'wó'lí (he has rubbed gently)
2. ọl'wó'dì (it has dried up)

No 7 [e], always short, is a mid central vowel of limited occurrence. It is heard in such forms as:

1. ọl'ye kó (he says that)
2. ban'cuò (let them come)
3. ọl'bígò (the child)
4. mítámè (the soil)
No. 8 [o'] is a short, tense, half-close, back vowel with medium lip-rounding. It occurs in such words as:

1. o'ta'mo (the horse)
2. mi'yom̄ (the flour)

and in such forms as:

1. o'fō (he is alive)
2. o'bōdī (he is lost)

The lengthened version of this vowel, [oː], is very rare, occurring in the word:

l̄i'l'bo'li (conversation)

and as a phenomenon in morphophonemic forms, e.g., o'cu:o: mu:o (he has seized it and is screaming).

No. 9 [u] is a short, tense, close, back vowel with lip rounding, but not so tense nor with such positive lip rounding as the French vowel in "bout". It occurs in words like:

1. o'bu:lo (the fetish)
2. ti'kūdī (the iron)

and in forms like:

1. li'tu (he's better) mǎ better;
2. o'gūdi (he has plucked out the feathers)

The lengthened version of this vowel, [uː] occurs in words such as:

1. i'mū:li (the rice)
2. o'gūdū (the spine)

and in forms like:

1. o'mū:di (he is lancing)
2. l̄i'ku:gī (it is cool)
Description of Gurma diphthongs.

No. 10 [ie] is a rising diphthong starting from the close front position for [i] and moving to the more open front vowel [e]. It occurs in words such as:

1. o'yiēnu (the sun)
2. o'piēmu (the arrow)

and in such forms as:

1. o'diédl (he has become master)
2. o'fiiēli (he has come to an agreement with)

No. 11 [ia] is a rising diphthong starting from the close front position for [i] and moving to the very open front vowel [a]. It occurs in such words as:

1. li'miali (the nose)
2. o'bijagu (the boat)

and in such forms as:

1. o'ciānī (he has accompanied)
2. o'niānī (he has promised)

No. 12 [o] is a rising diphthong which has started from the half close back position for [o] and moved over to the more open [o]. It occurs in such words as:

1. o'boğū (the arm)
2. o'cōbū (the threading device for tying mats with shredded bark).
and in such forms as:

1. °'cgoôdî (he has counted)
2. li'fôbôgli (it's far away)

No. 13 [u] is a rising diphthong which also starts from the half close back position for [o] and moves to the half-open front position [ε]. It occurs rarely, as follows:

1. li'boeli (the chat)
2. li'iloe (they)
3. i'köê (the bush cows)
4. i'moê (the weeping)
5. i'yoê (the iguanas)
6. li'bgôdîlîoê (the earthworm)

No. 14 [u] is a rising diphthong which starts from the close back position for [u] with noticeably more lip-rounding than for the diphthong [u], and moves to the open back vowel [o]. It occurs as follows:

1. li'fôblî (the woods)
2. li'pôblî (the liver)

No. 15 [u] is a rising diphthong which also starts from the close back position for [u] with maximum lip-rounding and moves only as far as the rounded half-close back vowel [o]. It occurs in:

1. ődôlo (the pig)
2. 1îbyôlî (the shallow depression)

and in such forms as:

1. li'kôôdi (it is dry)
2. őfôô (he's breathing)

No. 16 [a] is a falling diphthong which starts from the unrounded open front position for [a] and moves to the position for [i] with considerable tensing and lip spreading. It occurs only in the class of words known as ideophones in such adwords as cáig (completely).

cai (completely)
raipat (very with white)
The effect of the diphthongs

The two diphthongs, [ie] and [ia] affect preceding consonants so that they are palatalized. The first, [ie], is somewhat restricted, not occurring after [k], [g], [h], [w] or any nasal, [m], [n], [ŋ], [g], or [ŋm]. It occurs medially and finally after all other consonants.

\[ \begin{align*}
\text{\textipa{piè}:} & \quad \text{she is winnowing (i.e., by shaking hard up and down)} \\
\text{\textipa{bie}:} & \quad \text{he is belching} \\
\text{\textipa{tie}:} & \quad \text{he is doing} \\
\text{\textipa{die}:} & \quad \text{he is master} \\
\text{\textipa{cie}:} & \quad \text{he is superior} \\
\text{\textipa{jiè}:} & \quad \text{he is afraid} \\
\text{\textipa{kpiè}:} & \quad \text{he is whittling} \\
\text{\textipa{gbie}:} & \quad \text{it, i.e., the large pot, is full} \\
\text{\textipa{fiè}:} & \quad \text{he has taken by force} \\
\text{\textipa{sie}:} & \quad \text{he has dyed} \\
\text{\textipa{tie}:} & \quad \text{he has moved over} \\
\text{\textipa{yie}:} & \quad \text{he has refused}
\end{align*} \]

The second diphthong causing palatalization, [ia], occurs medially and finally after all consonants except [g], [k], [h] and [w].

\[ \begin{align*}
\text{\textipa{pia}:} & \quad \text{it, is, the road, is wide} \\
\text{\textipa{bia}:} & \quad \text{he is evil} \\
\text{\textipa{tià}:} & \quad \text{he's cogitating} \\
\text{\textipa{dia}:} & \quad \text{he has set a trap} \\
\text{\textipa{cia}:} & \quad \text{he has escaped} \\
\text{\textipa{jià}:} & \quad \text{he has cut into little pieces} \\
\text{\textipa{kpià}:} & \quad \text{he came in first}
\end{align*} \]
The diphthongs [oe], [on], [uo], and [uo] affect preceding consonants so that they are labialized, slightly by [oe] and [o], strongly by [up] and [uo]. No. 13 [oe] occurs, as shown above, in one instance medially, after [b], and finally after, [b], [k], [m], [l] and [y], (see pg. 22).

The diphthongs [era] and [up] occur in opposition after all the consonants except the double stops, [kp], [gb] and [gm], and [h] and [w]. Most oppositions are minimal.

- o' gbi'amu' the cane, walking stick
- o' mia' he has requested
- o' ni'a' he has disputed
- o' pe'di' he has grazed it
- o' ni'abí it, i.e., the toga, is too tight
- o' gmi'a' he has wrung it
- o' fia' he is flat/sunken nosed (i.e., through leprosy or accident)
- o' sia' he has burned it
- o' li'a' he has plastered it
- o' yia' he's ill

The diphthongs [og], [o], [uo], and [uo] affect preceding consonants so that they are labialized, slightly by [og] and [o], strongly by [up] and [uo]. No. 13 [og] occurs, as shown above, in one instance medially, after [b], and finally after, [b], [k], [m], [l] and [y], (see pg. 22).

The diphthongs [ga] and [upa] occur in opposition after all the consonants except the double stops, [kp], [gb] and [gm], and [h] and [w]. Most oppositions are minimal.

- o' po'di' (she has hatched) o' pu'bi' (she has traversed)
- o' bôb (it is scratching) o' bu'b (he has liked)
- o' tgo'di' (he has taken down) o' tu'bi' (he has removed the fibers, i.e., from beans)
- o' dgo'li' (he has tied to tow) o' du'bi' (he has towed)
- o' ca'bi' (he has counted) o' cu'bi' (he has courted)
- o' gbo'nî (he has snagged and is suspended on) o' jumáni (it, i.e., the town, is far away)
The diphthong [uo] occurs after all consonants except [h], the nasals, and the double stops, and causes labialization of the preceding consonant. It occurs after every consonant in opposition to [o] as follows:

- [uo] (he has grown old)
- [uo] (it is stunted)
- [uo] (it has helped)
- [uo] (he has hopped across)
- [uo] (it has rained gently)
- [uo] (he has pecked at)
- [uo] (he has cut the throat)

lígōlī (the hump) lígwōlī¹ (fullness to satiety)
ō ḋò (he's alive) ō ḋèwò (he has breathed)
ō s'ōndī (he has sharpened) ō s'yōndī (he is silencing)
ō h'ōndī (he has untied) ō h'ńońdi (it has moulted)
ō w'ōdī (he has gathered with his hands) ō w'yōdī (he has revealed)
ō y'ōdī (he has crumbled) ō y'yōdī¹ (he has melted - the ice, salt, not fat)

Description of Gurma Consonants

No. 1 [p] is a bi-labial, voiceless, slightly aspirated stop occurring initially, medially or finally in such words as:
lp̥dī (chop it) līlp̥pālī (the carp)

If occurring final it is unexploded and very emphatic:
p̥l'dēp (bang, wham)

No. 2 [b] is a bi-labial, voiced stop occurring initially or medially in such words as:
būdī (dig) ō'bādō (the chief)

No. 3 [t] is an alveolar, voiceless, slightly aspirated stop occurring initially or medially in such words as:
tā (take it) ō'tībū (the tree)

No. 4 [d] is an alveolar, voiced stop occurring initially or medially in such words as:
dā (buy it) ōdōgū (the town)

¹ data incomplete
No. 5 [d] is a voiced apico-alveolar flap occurring medially only in such words as:

'tàdīgī' (to be weak)
gī\'bādīgō (a lizard)

No. 6 [c] is a voiceless, palatal, slightly aspirated stop, made by humping the tongue so that the middle part is in contact with the hard palate. A front vowel draws it towards [tʃ] and a back vowel towards [ky], but it is not either of these. It occurs initially or medially in such words as:

'cā' (choose)
ō'cołō (the fox)

No. 7 [j] is the voiced counterpart of [c] also influenced in the same way by following vowels, although it is neither [dz] nor [gy]. It is a voiced palatal stop occurring initially or medially in such words as:

jà (cut it)
gī\'janjāŋgā (the bat)

No. 8 [k] is a voiceless, velar, slightly aspirated stop occurring initially or medially in such words as:

'kālī (sit down)
lī\'ku∗\lī (the hoe)

No. 9 [g] is a voiced, velar stop occurring initially or medially in such words as:

gā' (take it -- i.e., from someone's hand)
ō\'gū\'dō (the watchman)
No. 10 [ɓ] is a voiced, velar implosive\(^1\), made by lowering the larynx and drawing in the breath -- with no audible suction -- before the stop is released. Generally speaking it occurs medially only in such words as:

\[
\begin{align*}
\text{mǐ'śag̃̌im̃̌o} & \quad \text{(the itchiness)} \\
\text{'boag̃̌i} & \quad \text{(to divide)} \\
\text{ti'pəg̃̌idi} & \quad \text{(the praise)}
\end{align*}
\]

Some speakers have been known to use [ɓ] in initial position before an unstressed vowel, e.g., [ɓi]bīg̃̌o but no instance of [g̃̌] and [ɓ] in opposition has been recorded.

No. 11 [k̃̌p̃] is a voiceless, velar-labial\(^2\) stop with no aspiration. The back of the tongue against the soft palate makes a velar closure as the glottis rises slightly and the lips are closed, then both stops are released together. This sound occurs initially and medially in such words as:

\[
\begin{align*}
\text{k̃̌pa} & \quad \text{(to herd)} \\
\text{d̃̌ok̃̌po}̌lo & \quad \text{(the elder)}
\end{align*}
\]

---

\(^1\) But see Ladefoged, *A Phonetic Study*, 1964, p. 6. "In the West African languages in which glottalic ingressive sounds were recorded,...(they) were seldom ingressive in the sense that on the release of the articulatory closure air flowed into the mouth...Few people would call such a sound implosive."

\(^2\) The term 'velar-labial' is used here rather than the accepted term 'labio-velar' because a) a preceding nasal whether syllabic or non-syllabic is always the homorganic velar nasal and b) [k̃̌p̃] is confused (by outlanders) with [p] but never with the [k]; similarly [ɓ̃̌b̃] and [ɓ̃̌m̃] may be confused with [b] and [m] but never with [g] and [ŋ].
No. 12 [gb] is the voiced counterpart of [Kp]. While no noise of suction has been observed, some speakers when pronouncing [gb] can be seen to draw in air, i.e. [gb ≈ gb], but this variation never occurs in opposition with [gb]. This sound occurs initially and medially in such words as:

\[\text{fbi'di} \quad \text{(dig)}\]
\[\text{ogba'do} \quad \text{(the leper)}\]

No. 13 [m] is a voiced bi-labial nasal occurring initially, medially and finally in such words as:

\[\text{mf'di} \quad \text{(break it - i.e. the taboo)}\]
\[\text{omado} \quad \text{(the new mother)}\]
\[\text{bimm} \quad \text{(very, used with to be dark)}\]

No. 14 [tur] see at No. 21.

No. 15 [ny] is a voiced, labio-dental nasal occurring in such forms as:

\[\text{ny'fa} \quad \text{(I thank you)}\]
\[\text{nylwlo} \quad \text{(my younger)}\]

No. 16 [n] is a voiced, alveolar nasal occurring initially, medially and finally in such words as:

\[\text{ndi} \quad \text{(to wash the hands)}\]
\[\text{onlanlo} \quad \text{(the guinea worm)}\]
\[\text{bem} \quad \text{(that they)}\]

No. 17 [tun] see at No. 21.

No. 18 [n] is a voiced, palatal nasal, the middle part of the tongue, rather than the tip as for [n], or the back as for [ŋ] being in contact with the hard palate. It occurs initially and medially in such words as:

\[\text{nan'ī} \quad \text{(leave)}\]
\[\text{o'nanano} \quad \text{(the porcupine)}\]
No. 19 [ŋ] see at 21.

No. 20 [ŋ] is a voiced, velar nasal, the back of the tongue being in contact with the soft palate. It occurs initially, medially and finally as follows:

\[
\begin{align*}
\text{ŋá} & \quad \text{(leave it alone)} \\
\text{1\text{'ŋáni} } & \quad \text{(it is good)} \\
\text{caŋ} & \quad \text{(completely)}
\end{align*}
\]

Nos. 14 [ŋ], 17 [ŋ], 19 [ŋ] and 21 [ŋ] are syllabic nasals determined by the following consonant which is always preceded by a homorganic nasal. These nasals have their own tone and may occur utterance initial. They may be preceded by a vowel as follows:

\[
\begin{align*}
\text{tëno q\text{'ligi} } & \quad \text{(hand him my money)}
\end{align*}
\]

No. 22 [ŋm] is a voiced, velar-labial nasal made by closing the lips simultaneously with making a velar closure and raising the glottis. The release of both stops is co-articulated. This sound is found initially and medially in such words as:

\[
\begin{align*}
\text{ŋmē} & \quad \text{(who?)} \\
\text{ɔŋmē əmō} & \quad \text{(the monkey)}
\end{align*}
\]

No. 23 [f] is a voiceless, labio-dental fricative, occurring initially and medially in such words as:

\[
\begin{align*}
\text{fā} & \quad \text{(to wash the face)} \\
\text{ō\text{'}fūdū} & \quad \text{(the strength)}
\end{align*}
\]

No. 24 [s] is a voiceless, alveolar fricative, occurring initially, medially and finally in such words as:
'sèdī (to stop) fas (completely)

ō'ísānu (the path)

No. 25 [1] is a voiced, alveolar lateral, always with "clear" resonance occurring initially and medially in such words as:

'lāndī (to take off overhead)

ō'līｂo (the hippopotamus)

No. 26 [w] is a voiced labio-velar bi-labial semi-vowel occurring initially and medially in such words as:

lwādī (to make it less)

lwē (the snakes)

No. 27 [y] is a voiced, palatal semi-vowel occurring initially and medially in such words as:

’yādī (to scatter)

yāyanū (the illness)

No. 28 [h] is a voiceless, laryngal fricative occurring in Fada dialect only initially in a few borrowed Hausa words such as:

'hālī (until/even to)

'hālabāda (never)

As the oath hālī'ō'tiēnu (even to God) is commonly used to affirm the truth of any statement, from the most trivial to the most profound, [h] occurs frequently.

No. 29[2] is the glottal stop occurring medially in such words as:

d̩kpa2ku (the box)

d̩bà2tf (he was tidying up)
Table 2: Table of Gurma Phonemes

<table>
<thead>
<tr>
<th>CONSONANTS</th>
<th>BILABIAL</th>
<th>LABIODENTAL</th>
<th>ALVEOLAR</th>
<th>PALATAL</th>
<th>VELAR</th>
<th>LABIOVELAR</th>
<th>LARYNGAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voiceless stops</td>
<td>p</td>
<td>t</td>
<td>c</td>
<td>k</td>
<td>kp</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voiced stops</td>
<td>b</td>
<td>d</td>
<td>j</td>
<td>g</td>
<td>gb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nasals</td>
<td>m</td>
<td>n</td>
<td>n</td>
<td>o</td>
<td>ñm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voiceless Fricatives</td>
<td>f</td>
<td>s</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
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<tr>
<td>Lateral</td>
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<td></td>
</tr>
<tr>
<td>Semi-Vowels</td>
<td>w</td>
<td></td>
<td></td>
<td>y</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Vowels

<table>
<thead>
<tr>
<th></th>
<th>front</th>
<th>central</th>
<th>back</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close</td>
<td></td>
<td></td>
<td>i</td>
</tr>
<tr>
<td>Half-close</td>
<td>e</td>
<td></td>
<td>o</td>
</tr>
<tr>
<td>Open</td>
<td></td>
<td></td>
<td>a</td>
</tr>
</tbody>
</table>

Phonemic tones are very high /"/, high /'/, mid /-/ , low /'/' and rising glide, /~/. Stress occurs on the base syllable of nouns and on the first syllable of verbs.

Length is phonemic for each vowel and is indicated by writing the vowel twice.

1The occurrence of this marginal phoneme is discussed on page 41.
The Gurma Vowel Phonemes

The phoneme /i/ has two variants:

[i] and [i].

The short variants [i] and [i] never occur in contrast. [i] occurs initial and final, [i] in almost all other environments. In a very few words [i] - rather than [i]-occurs medially, but only in the stressed syllable, and only in the environment of consonants that draw [i] to the position of [i], e.g., a following [i] or a preceding /n/ as in: *lǐti* (the book), ኤንিল (the person), በኝም (the water). No opposition between [i]and [i] has been recorded.

The variant [i], short in stressed syllables becomes very short in an unstressed syllable, e.g., ለታለን (he is creeping). This is predictable, regular, and involves no opposition.

But [i] and [i] occur in contrast in stressed syllables as the following minimal pairs show:

\[ \text{b'mfdi (he has scraped off some skin)} \]
\[ \text{b'mdia (he has broken - i.e., a taboo)} \]

These data show that [i] and [i] are positional variants, members of one phoneme /i/, and that the lengthened vowel is another phoneme /ii/ in contrast with /i/.

The phoneme /e/ has two variants [e] and [ê]. The variant [e] occurs after the front vowel [i] on-glide, the variant[ê] occurs in all other environments. These vowels are never in contrast but members of the phoneme /e/.

That the phoneme /e/ is in contrast with the lengthened version /êe/.
can be shown by only one near minimal pair:

- \( \text{b'gedi} \text{ demptö} \) (he has gone home - close by)

- \( \text{b'gedi} \text{ dempö} \) (he has gone home - far away)

but the phonemic significance of the lengthened vowel is also shown by the following example of morphophonemic phenomenon:

- \( \text{b'fiè} \) (he has snatched)

- \( \text{o'fiè'sanì} \) (he has snatched and run)

The phoneme /e/ if final in noun forms will become [e'] when it participates in the morphophonemic phenomenon of negation. So /ee/ is in contrast with /e/ and must be considered as phonemically distinct.

The phoneme /a/ has three variants; the short vowels [ə], [a] and [a].

The vowel [ə] occurs in stressed syllables in ideophones only (see Appendix 1); it occurs in unstressed syllables in the following environments;

- after [g] or [m] or [k], e.g., gi'bigö, mimö, o'yödi kə'da,

- in words of C1VC2 pattern where C2 is a nasal, e.g., bən, ban.

---

1A contrast is suspected between [ə] and [a] in bən and ban in the sequences:

- \( \text{o+dën+gödi+gi+bən'+da} \) went and bought

- \( \text{o+dën+gödi+gi+ban'+da} \) he went to buy

It seems that the second sequence should be transcribed:

- \( \text{o+dën+gödi+gi+ban'} \) da

i.e., ba'n not ban, in contrast with bən above; and that a suspected analogous pair man and man, does not occur in Fada dialect, but in eastern, and should in any case be transcribed man and ma'n. There remains the possibility that further evidence will come to light concerning these morphemes and therefore concerning the status of [ə].
As neither [ø] nor [a] ever occur in these environments, [ø] makes no contrast with them.

The variant [ø] occurs before an implosive [g], after [w] and after the on-glides [g] and [ŋ]. The variant [a] occurs in all environments other than those mentioned for [a] and [ø]. So the three variants are in complementary distribution, members of a phoneme /a/.

But the short phoneme /a/ occurs in contrast in stressed syllables with the long vowel [a'] as follows:

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ә'cándī</td>
<td>(he is rinsing)</td>
</tr>
<tr>
<td>ә'cά'ndī</td>
<td>(he is selling...by measure)</td>
</tr>
</tbody>
</table>

The positional variant of [a], [ø], is also in contrast with [a'] as the following minimal pairs show:

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ә'wά'ndī</td>
<td>(he has torn off (i.e. a chicken leg)</td>
</tr>
<tr>
<td>ә'wú'dī</td>
<td>(he is meat hungry)</td>
</tr>
<tr>
<td>ғ'wə'gī</td>
<td>(it - i.e., the ground - is dry)</td>
</tr>
<tr>
<td>ɟ'wə' gī</td>
<td>(it - i.e., the rain - is long in coming)</td>
</tr>
<tr>
<td>ә'wά'li</td>
<td>(he has bathed)</td>
</tr>
<tr>
<td>ә'wά'lí</td>
<td>(he has caressed)</td>
</tr>
<tr>
<td>ә'wά'dl</td>
<td>(he has decreased)</td>
</tr>
<tr>
<td>ә'wά'ɖl</td>
<td>(it - the water-hole - has dried up)</td>
</tr>
</tbody>
</table>

So there is a phoneme /a/ whose members are [a], [ø], and [ø]; and a phoneme /a'/ whose members are [a'] and [ø'].

The phoneme /o/ has no recorded variant in the lexical data. The phonemic significance of the lengthened vowel /o'/ is shown by the following morphophonemic phenomenon:
b'cuo (he has grasped it)
b'cuo mup (he has grasped it and is screaming)

If a verb with final [-o] is followed immediately by another verb having
the same subject, the final [-o] —> [o']. So the lengthened vowel
[o'] is in significant contrast with the phoneme /o/ and must be re-
garded as a phoneme /o'/.  

The phoneme /u/ and the phoneme /u'/ have no recorded variants.
That these two are in contrast is shown by the following minimal pairs:

b'budf (he is scratching a shallow hole)
b'bud'f (he is crying)
b'luni (he has woven)
b'lu'nī (he has drawn - i.e., water)

That the vowels /a/, /e/, /i/, /o/ and /u/ are in contrast with each
other is shown by the following minimal - or near minimal - pairs.

/badī/ (to separate one from group)
/pādī/ (to tattoo)
/bedī/ (to sneer at)
/pēdī/ (to chop down)
/bidī/ (to stammer)
/pidī/ (to sweep)
/bōdī/ (to perish)
/pōdī/ (to grow old)
/būdī/ (to unearth)
/pūdī/ (to sprout)

That the vowels /a'/, /e'/, /i'/, /o'/ and /u'/ are in contrast can-
not be shown by minimal pairs in lexical items due to the limited occurrence
of /o'/ and /e'/ in isolated words. However, the following examples
show all the long vowels in contrast:

- \( \dot{\varepsilon} \) 'pa\(^\prime\)di (he has conquered)
- \( \dot{\varepsilon} \) 'pedi (he has chopped) vs \( \dot{\jmath} \) 'k\(\varepsilon\)'di (he has clucked in his throat i.e. as a gecko)
- \( \dot{\varepsilon} \) 'pi\(^\prime\)di (he has exhumed)
- \( \dot{\varepsilon} \) 'pu\(^\prime\)di (it, i.e., the tree, has burst into flower)
- 1\(\varepsilon\)tu\(^\prime\)li (the termites)
- 1\(\varepsilon\)wa\(^\prime\)li (the desire for meat)
- 1\(\varepsilon\)ba\(^\prime\)li (the riches)
- 1\(\varepsilon\)bo\(^\prime\)li (the conversation)

The examples show that the lengthened vowels are in significant contrast with each other as well as with the short vowels and must be regarded as the phonemes /aa/, /e e/, /ii/, /oo/, and /uu/.

**Nasalization** All vowels may occur with nasalization resulting from the influence of a preceding or following consonant. This is predictable and makes no contrasts. Both the nasal and the following consonant are completely articulated.

- \( \dot{\varepsilon} \) 'bandi (he has learned)
- \( \dot{\varepsilon} \) 'ben\(\varepsilon\) (he's mature)
- \( \dot{\varepsilon} \) 'bindi (he has spent a year)
- 1\(\varepsilon\)bonla (the thing)
- \( \dot{\varepsilon} \) 'bund\(\varepsilon\) (he has explained)
The Gurma Consonant Phonemes

The phoneme /p/ is shown to be in contrast in minimal or near minimal pairs with phonemes /b/, /m/ and /kʰ/.

/b/  ő¹'vābdí (he is boxing the ears of)
     ő¹bābdí (he is taking from the mouth of)
/m/  ő¹'pābdí (he has recovered from a faint)
     ő¹'mābdí (he has drawn out i.e., as from under arm, from a file, etc.)
/kʰ/  ő¹'pāgi (she has cooked i.e., gruel)
     ő¹kpāgi (he has tapped i.e., a nail, the door)

The phoneme /b/ has been shown to be in contrast with the phoneme /p/, and is shown by minimal pairs to be in contrast with the phonemes /m/, /w/, and /gʰ/.

/m/  ő¹bābdí (he has removed from the mouth of)
     ő¹'mābdí (he has drawn out i.e., as from under arm etc.)
/w/  ő¹'bā'dí (he has scraped all out)
     ő¹'wā'dí (he has become meat hungry)
/gʰ/  ő¹bābdí (he has removed from the mouth of)
     ő¹gʰbābdí (he has unrolled)

The phoneme /t/ is shown by the following minimal or near minimal pairs to be in contrast with the phonemes /d/, and /c/.

/d/  ő¹tāgi (he has followed)
     ő¹dāgi (he has hobbled)
The phoneme /d/ has two variants, [d] and [d]. The variant [d] occurs only medially, intervocally, before an unstressed medial /i/ as in the following words:

\[\text{gifidiga} \quad \text{(the lamp)}\]
\[\text{gitadiga} \quad \text{(the dish)}\]

The variant [d] occurs in all other environments, so [d] and [d] are not in opposition but in complementary distribution, members of the phoneme /d/.

The phoneme /d/ has been shown to be in contrast with the phoneme /t/, and is now shown by the following minimal or near-minimal pairs to be in contrast with the phoneme /j/.

\[\text{jadl} \quad \text{(he has detoured)}\]
\[\text{jadli} \quad \text{(he has bustled about)}\]

The phoneme /c/ has been shown to be in contrast with the phoneme /t/, it is further shown by the following minimal pairs to be in contrast with the phonemes /j/, /k/, /y/ and /s/.

\[\text{kandli} \quad \text{(he has surpassed)}\]
\[\text{kandli} \quad \text{(he has asked for blessing at the time of sacrifice)}\]
\[\text{yandli} \quad \text{(he has turned face up - i.e. a book)}\]
The phoneme /j/ has been shown to be in contrast with phonemes /d/ and /c/, and is now shown by the following minimal or near minimal pairs to be in contrast with the phoneme /g/.

/g/  o'jádi  (he is detouring)
     o'gádi  (he is tying with withes)

The phoneme /g/ has two variants, [g], and [g]. The variant [g] occurs only medially in the environment of a preceding short vowel and a following non-final, unstressed short vowel in such words as:

lilidagildi  (it is sufficient)

minoágima (the ring)

The variant [g] occurs in all other environments. The two variants [g] and [g] are never in opposition but are complementary, members of the phoneme /g/.

The phoneme /g/ has been shown to be in contrast with the phoneme /j/ and is now shown by the following minimal or near minimal pairs to be in contrast with the phonemes /k/, /gab/, and /g/.
The phoneme /h/ is shown to be in contrast at Fada in minimal or near minimal pairs with the phoneme /ŋ/.

\[
\begin{align*}
/h/ & \quad \text{ŋálf} \quad \text{(to sew)} \\
 & \quad \text{hálf} \quad \text{(until)}
\end{align*}
\]

The occurrence of the glottal stop [ʔ] is marginal and predictable. In the Fada dialect it occurs in such words as ḍokáiku (the box), ọpoiku (the overlap), ụgwọt (to overthrow) and ụhọgọt (to grope).

The plurals of the two nouns cited above have no unusual phonological features and give a clue to the use of the glottal stop along with the unusual occurrence of /-k/ and /-t/ initial in an unstressed syllable. A comparison with other nouns forming their plurals in ti-di shows that their singulars regularly have the affixes o-gu with the base appearing in the plural just as in the singular, e.g.,

\[
\begin{align*}
tiboádụ & \quad \text{(the arms)} \\
oboágụ & \quad \text{(the arm)}
\end{align*}
\]

By analogy one might expect:

\[
\begin{align*}
tikpágídụ & \quad *ōkápágígu \quad \text{(the box)} \\
típógídụ & \quad *ōpógígu \quad \text{(the overlap)}
\end{align*}
\]

\[1\text{In the northern dialect the phoneme /ŋ/ is not used in word or syllable initial position being replaced by /h/ pronounced with strong nasalization.}\]

\[
\begin{align*}
hálf & \quad \text{(until)} \\
o'ňálf & \quad \text{(he sews)} \\
o'ńánu & \quad \text{(the broom)}
\end{align*}
\]
But it appears that the unstressed vowel sequence \texttt{-gigu} has been reduced perhaps as follows:

\texttt{-gigu} \rightarrow \texttt{*-giku} \rightarrow \texttt{*-gku} \rightarrow \texttt{*-kku} \rightarrow \texttt{2ku}.

A similar explanation is offered for the occurrence of the glottal stop in \texttt{gu2ti} (to overthrow) and \texttt{baa2ti} (to grope). The imperfective of the verb \texttt{baali} (to grope) in Eastern dialect is \texttt{baalidì}. It would seem that in Fada dialect devoicing of /d/ in the environment of preceding /l/ + unstressed vowel and a following unstressed vowel has occurred perhaps as follows:

\texttt{-lidi} \rightarrow \texttt{*-liti} \rightarrow \texttt{*liti} \rightarrow \texttt{*tti} \rightarrow \texttt{2ti}.

While this reduction is common at Fada it is not universal, and eastern dialect speakers reject it, retaining the medial short vowel and regular \texttt{[-gu]} and \texttt{[-di]} endings. The short interconsonantal vowel is not deleted in other environments in Fada dialect.

As this occurrence of the glottal stop is marginal and predictable, \texttt{[2]} is not considered a phoneme. In the orthography it is represented by whatever consonant it precedes, e.g., \texttt{[ku]} \rightarrow /kku/, \texttt{[2ti]} \rightarrow /-tti/. This orthography has been well accepted by newly literate adults.

The phoneme /m/ has two variants, [m] and [ŋ]. The variant [ŋ] occurs before /f/ and /w/; the variant [m] occurs in all other environments. These variants are not in opposition, but in complementary distribution, members of the phoneme /m/.

If a nasal occurs before /m/, for instance when a verb with a nasal in the base is nominalized by the \texttt{mi-ma} noun class affixes, e.g.,
The verb base assimilates to the /-m-/ of the suffix and a geminate /-m-/ results:

\[ \text{mi} \text{gben} \text{ma} \] (the completion)

In ideophones (see below, Appendix 1) /mm/ is found word final, e.g., \[ \text{bimm} \] (very, used with dark).

The phoneme /m/ has been shown to be in contrast with the phonemes /n/ and /b/ and is shown by the following minimal pairs to be in contrast with /\text{m}/, /w/ and /n/.

\[ /\text{m}/ \quad \partial \text{m} \text{á} \text{b} \text{i} \] (he has sucked noisily, i.e., as gravy from his finger)
\[ \partial \text{m} \text{á} \text{b} \text{i} \cdot \] (he has carried in his arms)

\[ /w/ \quad \partial \text{m} \text{á} \text{b} \text{i} \] (he has noisily sucked, i.e., as gravy from his fingers)
\[ \partial \text{w} \text{á} \text{b} \text{i} \] (he cannot walk, i.e., his crippling is so severe)

\[ /n/ \quad \partial \text{n} \text{á} \text{n} \text{d} \text{í} \] (he is perspiring)
\[ \partial \text{ná} \text{n} \text{d} \text{í} \] (he is coming to resemble)

The phoneme /n/ has been shown to be in contrast with /m/ and is now shown to be in contrast in minimal or near-minimal pairs with /\text{n}/ and /\text{y}/.

\[ /\text{n}/ \quad \partial \text{ná} \text{gí} \] (he is heaping up)
\[ \partial \text{ná} \text{gí} \] (he is applying heat all around)

\[ /\text{y}/ \quad \partial \text{ná} \text{gí} \] (he has piled up)
\[ \partial \text{yá} \text{gí} \] (he has feinted)

The phoneme [\text{n}] has been shown to be in contrast with /n/, and is now shown to be in contrast in minimal or near minimal pairs with /\text{y}/ and /\text{y}/.
The phoneme /ŋm/ has been shown to be in contrast with the phoneme /m/ and is now shown to be in contrast in minimal pairs with the phoneme /ŋ/.

/p/, and /b/.

The phoneme /s/ is shown to be in contrast in minimal pairs with the phoneme /f/.

The phoneme /w/ has been shown to be in contrast with the phonemes /b/ and /m/. It is of course in contrast with all labialized consonants as the following minimal pairs show:

<table>
<thead>
<tr>
<th>Phoneme</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ŋ/</td>
<td>ó ña'gí</td>
</tr>
<tr>
<td></td>
<td>(he is applying heat all around)</td>
</tr>
<tr>
<td></td>
<td>ó ñà'gí</td>
</tr>
<tr>
<td></td>
<td>(he has fainted)</td>
</tr>
<tr>
<td>/y/</td>
<td>ó ña'dí</td>
</tr>
<tr>
<td></td>
<td>(it, i.e., the compound, has burned furiously)</td>
</tr>
<tr>
<td></td>
<td>ó ñyà'dí</td>
</tr>
<tr>
<td></td>
<td>(he has chased)</td>
</tr>
<tr>
<td>/ŋm/</td>
<td>ó ñmábí</td>
</tr>
<tr>
<td></td>
<td>(he has carried in his arms)</td>
</tr>
<tr>
<td></td>
<td>ó ñábí</td>
</tr>
<tr>
<td></td>
<td>(it, i.e., the house, has been tightly packed, i.e., as with people)</td>
</tr>
<tr>
<td>/f/</td>
<td>ó fábí</td>
</tr>
<tr>
<td></td>
<td>(he has brushed/scooped up a little, i.e., dirt, water)</td>
</tr>
<tr>
<td></td>
<td>ó pábí</td>
</tr>
<tr>
<td></td>
<td>(he has flattened...out)</td>
</tr>
<tr>
<td>/b/</td>
<td>ó fábí</td>
</tr>
<tr>
<td></td>
<td>(he has whipped, i.e. with a bunch of fine twigs)</td>
</tr>
<tr>
<td></td>
<td>ó babí</td>
</tr>
<tr>
<td></td>
<td>(he has put in his own mouth)</td>
</tr>
<tr>
<td>/s/</td>
<td>ó sá'dí</td>
</tr>
<tr>
<td></td>
<td>(he has become itchy)</td>
</tr>
<tr>
<td></td>
<td>ó fá'dí</td>
</tr>
<tr>
<td></td>
<td>(he has thanked)</td>
</tr>
<tr>
<td>/w/</td>
<td>ó ñà'dí</td>
</tr>
<tr>
<td></td>
<td>(he has lessened)</td>
</tr>
</tbody>
</table>
(he has crossed/cut across)
(he has hatched)
(he has followed)
(he has left off following)

The phoneme /y/ has been shown to be in contrast with /n/. It would perhaps be useful to show it in contrast with the simple and palatalized forms of /n/ and /ŋ/ as follows:

(it - i.e., the door - is ajar)
(he's ill)
(he has heaped up)
(he has disputed)
(he has applied heat all around)
(he has barely touched)

Constraints on the Occurrence of the Phonemes.

a) All consonants may occur initially, prevocally:

(to obtain)  (to laugh)
(to choose)  (to build in mud)
(to buy)  (to pile up)
(to wash one's face)  (to be going out)
(to take, i.e., from the hand of)
(to trample)
(cut)  (to be strong)
(to be sitting)  (to be insipid)
(to fill it)  (to be in agreement)
(to be small)
Kpá  (to kill it)     yà  (to be open)

b) All consonants except /h/ may occur intervocalically if in this position they are initial in the stressed syllable:

ôbádô  (the chief)  ônánlô  (the guinea worm)
ôčánô   (the stranger) ôŋďánû   (the broom)
ôlďaăgû   (the piece of wood) ôpôăgû  (the gris gris)
ôřuôbû   (the kapok)  ôŋďaamô  (the monkey)
ôgănû    (the louse)  ôpîëmû   (the arrows)
ôjîinû    (the root)  ôsănû    (the path)
ôkaanû    (the place)  ôtîbû    (the tree)
ôćăênû    (the stream) ôwŏmô   (the deaf person)
ôlaanû    (the necklace) ôyŏmbô  (the slave)
ômădô    (the new mother) ôgbăadô  (the leper)

c) All consonants except /h/ may occur after a homorganic nasal which is syllabic and has a tone:

*î+hće+gêdî'  (I shall go)
*î+hdeŋ+gêdî'  (I went)
*î+kâŋ+gêdî    (I shall not go)

d) Only the consonants /b/, /d/, /g/, /l/, /m/, /h/ -- and /k/ and /t/ in the special circumstances explained above, pp. 41 - 42 -- may occur initially in an unstressed syllable intervocalically. Of these consonants only /b/, /d/, /g/, /l/, and /m/ may occur initially in an unstressed syllable between a nasal and a vowel:
V C V
ô'ltîbû (the tree)  ô'lsâmbû (the shea tree)
o'bâdô (the chief)  îsâandi (the shea trees)
o'dâagû (the piece of wood)  ôgbângû (the hide)
o'tîlû (the neck)  îf'înlî (the egg)
mî'tâmâ (the soil)  múyiëmmû (the calabashes)
o'mâano (the blacksmith)
ôkâkkû (the box)
båtti (to be tidying)

e) nasals may occur finally only when they are homorganic with a following initial consonant. As stated above in c) if the nasal is syllabic, any consonant except /h/ may follow it. Also, if the nasal is syllabic final in the first base of a compound noun, any consonant may follow it; the nasal will assimilate to the following consonant. The most common example of this is in compounds made with the noun libonla (the thing) and verb bases:

libonla. (the thing + bia (to be bad) ➔ libombiadila (the bad thing)
libonla (the thing + nani (to be nice) ➔ libonnanla (the nice thing)

f) Only homorganic nasals occur word final except in ideophones where /p/, /s/, and /mm/ have been recorded in word final position, (see below Appendix 1):

bân (that they)  pâdâp (wham)
wân (that he)  limm (very, with dark)
mîn (that I)  fâs (completely)
g) Two /m/ phonemes, /-mm-/, occur:

i. when a verb whose base contains a nasal is used as a gerund, e.g.,

\[ \text{báńlí (to know)} \rightarrow \text{mibámmá (the knowledge)} \]
\[ \text{ʃgbení (to finish)} \rightarrow \text{mígámmá (the end)} \]

ii. final in ideophones, see f) above.

Two /n/ phonemes occur when any word terminating in a vowel is followed by /n/, e.g.,

\[ \text{/ó'dogú/ (the town) + /ni/ (in) \rightarrow /ó'dogúnní (in the town)} \]
\[ \text{/ó'báńlí (he knows) + /ni/ (me) \rightarrow /ó'bánní (he knows me)} \]

Convering on Gurma Vowels.

a) The five vowels, /i/, /e/, /a/, /o/, /u/ may occur with or without the feature of length.

b) the vowels /á/, /ä/, /ó/, may occur as complete morphemes in isolation as follows:

\[ /á/ \quad \text{(you, 2nd person singular pronoun).} \]
\[ /à/ \quad \text{(they, 3rd person plural pronoun for a - a class nouns).} \]
\[ /ò/ \quad \text{(he/she, third person singular pronoun, it, pronoun for o - o and o - u class nouns)} \]
\[ /âà/ \quad \text{(you, 2nd person singular negative in free variation with /ŋaa/)} \]
\[ /àà/ \quad \text{(they, 3rd person plural negative for a - a class nouns)} \]

c) All vowels without the feature of length may occur medial and final, e.g.,
medial                                      final
/i/  /pìdī/ (to dig out)                   īdī    (the guinea corn)
/e/  /pèdī/ (to miss)                    īnē    (the cows)
/a/  /pàdī/ (to tear)                    āpālā (the granaries)
/o/  /pōdī/ (to grow old)               ōbádō  (the chief)
/u/  /pūdī/ (to sprout)                 ōsānū  (the path)

d) Only the vowels /i/, /a/, and /o/ may occur word initial. In this case they are syllables in themselves and morphemes, e.g.,
   ītāamī (the horses)
   ātānā (the stones)
   ōbádō  (the chief)

e) All vowels with the feature of length may occur medial but never initial. In medial position the vowels /ii/, /aa/ and /uu/ occur frequently, the vowels /ee/ and /oo/ very rarely, e.g.,
   pāidī (to dig up)
   kēdī (to cluck in throat, as a gecko)
   pādī (to separate)
   lībōoli (the conversation)
   pūudī (to spray water from one's mouth)

All vowels may occur within utterances with the feature of length in morphophonemic phenomena. This will be discussed in Chapter 4, p. 115.

f) All vowels without the feature of length occur before a nasal:
   /bindī/ (to spend a year)
   /libēndīlī/ (the drum)
   /bindī/ (to know)
/bʊŋgɪ/ (to be damp)
/bʊŋgɪ/ (to recall)

g) Among the vowels with the feature of length only /ii/, /aa/, /uu/ and /ee/ occur in the environment of a nasal in the data, e.g.,
/mɪbɪmɑ/ (the milk)
/mɪbāmɑ/ (the fall)
/bʊ̥u̥nɪ/ (to sprinkle)
/ʃmée n cuá/ (who has come?)

h) The six rising diphthongs, /ia/, /ie/, /oe/, /oa/, /ua/ and /uo/, occur word medial and final.

<table>
<thead>
<tr>
<th>medial</th>
<th>final</th>
</tr>
</thead>
<tbody>
<tr>
<td>lɪbɪlɪ (the bracelet)</td>
<td>ɔlbiá (he is evil)</td>
</tr>
<tr>
<td>mɪjɪmɛ (the food)</td>
<td>ɔljiè (he is afraid)</td>
</tr>
<tr>
<td>lɪboɛlɪ (the chat)</td>
<td>ɓlboè (they are chatting)</td>
</tr>
<tr>
<td>mɪsoɑmɛ (the blood)</td>
<td>ɔlsoá (he's a witch)</td>
</tr>
<tr>
<td>òbuɑŋgʊ (the water-hole)</td>
<td>ɔlsuá (he has threshed, i.e., in a mortar)</td>
</tr>
<tr>
<td>ðudʊlo (the pig)</td>
<td>ɔlsuó (he has scorched...i.e., the roasting peanuts)</td>
</tr>
</tbody>
</table>

i) There is a falling diphthong which occurs only in the class of words known as ideophones /ai/, e.g.,

cain (completely, with many verbs)

fai fai (completely, i.e., wash dirt out completely)

pāi pāi (clearly, i.e., tell him clearly/ very, with white)

One other falling diphthong has been recorded, but only in two expressions, (see below, Appendix 1):
The Gurma Tone Phonemes

The four level Gurma tones are shown in the following words or forms:

1. tī fā (we have washed our faces)
2. tī fā (we have taken up with our hands)
3. ò fā (he has taken up with his hands)
4. ò fā bì? (has he washed his face?)

In no. 1. [fā] is higher than [tī]. In No. 2. [fā] is lower than [tī]. In no. 3. [ò] and [fā] are on the same low tone, and this will be considered low [']. As [tī] is always higher than this tone, and lower than the tone of [fā] in No. 1, it will be considered to have a mid tone [-]. In No. 1 [fā] which is higher than [tī] will be considered to have a high tone [']. In No. 4 [bì] is appreciably higher than [fā] and this tone, ['], will be considered very high.

The four tones may also be observed in the following examples:

1. ò piā ṃpālā (he has granaries)
2. ṃpālā (the hearts)
3. ṃpālā (the granaries)
4. ṃpālī (the granary)
5. ṃpālī (the heart)

In No. 1 [ò] is again on a low tone in relation to the remaining tones, which are level and on the same pitch. In No. 2 [á-] is on a higher tone than the remaining tones, or than any tone of N. 3. So the ['] on [á-] of No. 2 may be regarded as a high tone; the remaining tone
[-], of [−pālā] in No. 2, and of [āpālā] in No. 3 may be regarded as a mid tone; and the tone ['] on [ò] of No. 1 as a low tone. The first [lī−] of No. 5 has a much higher tone than the first [lī−] of No. 4 while the remaining tones of these two words are on the same level. But No. 4 [lîpali] is identical in tones with No. 2 [āpālā], so the tone on [lī−] in No. 5 is in contrast with the high tone ['] and is a very high tone [∗].

The rising glide is shown by the following forms:

\[ \text{ò bə' } \] (he has fallen)
\[ \text{ò da' } \] (he has bought)

The falling glide is shown by the following nouns and forms:

\[ \text{ōjuábo } \] (the goat)
\[ \text{tidú'dì } \] (the pods)
\[ \text{ōgbângù } \] (the hide)
\[ \text{ò cá } \] (he has chosen)
\[ \text{ò cuá } \] (he has come)

Any long syllable, i.e., a syllable with a double vowel or an on-gl ide or a nasal off-gl ide, if followed by a syllable with a lower tone, or if sentence final with low tone, will have a falling glide. So the falling glide on long syllables is predictable and need not be written.

If two syllables with low tone occur successively sentence finally, the second low tone will be lower than the first, e.g.,

\[ \text{ò boànl } \] (it, i.e., the toga, is black)
\[ \text{ò gbèngì } \] (he is fat)

As its occurrence is regular and predictable, very low tone need not be written.
The Morphology of Gurma nouns

Identification of Gurma nouns

All Gurma nouns except a small sub-set, the 1st and 2nd person pronouns, may be identified by their occurrence in the noun class system. There are nine paired classes. Classes 1 to 7 have double pairs of affixes; prefixes and suffixes are paired in the singular and in the plural. Each of these pairs is phonologically identical or similar. The singular affixes are paired with plural affixes. Class 8, a mass class in which singular and plural are not distinguished, has just one pair of affixes. Class 9, which includes a small group of bound kin terms, is also the class in which foreign loan words and onomatopoeic words occur. Class 9 is regarded as having zero morphemes in the singular prefix and suffix and the plural prefix. The class affixes co-occur with tonal patterns. The choice of these tonal patterns is to some extent conditioned by the tone of the stem, so is not completely arbitrary.

Other identifying criteria for nouns are:

a) occurrence with a possessive preceding the noun base and its suffix, replacing the class prefix.

b) occurrence in the form **noun base + suffix** or **possessive + noun base + suffix** as S in an S V O sequence. This last definition will

---

1The noun class system is generally referred to in Bantu languages as the gender system. There is no correlation of the genders with sex references.
accomodate any noun, even the class 9 nouns which have zero gender markers in the singular but occur with possessive prefixes.

The morphology of Gurma nouns will be taken up under the following headings:

a) the gender classes and their tonal subdivisions,
b) the classes with the possessive,
c) the classes with the relative morpheme,
d) the classes with the negative morpheme.

The concurrent pronouns will be discussed after the nouns.

### The Gender Classes and their Tonal Subdivisions.

The class affixes are as follows:

<table>
<thead>
<tr>
<th>Class Prefix</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prefix</td>
<td>Suffix</td>
</tr>
<tr>
<td>1</td>
<td>o-</td>
<td>-o,-Ø</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>o-</td>
<td>-o, Ø</td>
</tr>
<tr>
<td>3</td>
<td>o-</td>
<td>-u</td>
</tr>
<tr>
<td>4</td>
<td>o--bu-</td>
<td>-bu</td>
</tr>
<tr>
<td>5</td>
<td>o--gu</td>
<td>-gu</td>
</tr>
<tr>
<td>6</td>
<td>li-</td>
<td>-li,-la</td>
</tr>
<tr>
<td>7</td>
<td>gi-</td>
<td>-ga</td>
</tr>
<tr>
<td>8</td>
<td>mi</td>
<td>-ma (non-count)</td>
</tr>
<tr>
<td>9</td>
<td>Ø-</td>
<td>-Ø</td>
</tr>
</tbody>
</table>
The noun tonal patterns. There are eight common noun tonal patterns, labelled for convenience from A to H. Only three tones, very high /"/, high /'/ and mid /-/ occur with the simple nouns. Stress, which always occurs on the base, is not marked.

A  -' -  o bóado  (the chief)
B   ' --  ónīlo  (the person)
C   ' ' -  ódūbū  (the shea tree)
D   ---  ótāamō  (the horse)
E   ' - '  óduanū  (the bed)
F   ' ' '  óbēnū  (the branch)
G  " --  ósānū  (the path)
H  " " -  ógāanū  (the broom)

Class 1 nouns. The class 1 o - o, bi - ba nouns have the distinctive semantic feature + human. Nouns referring to humans occur in this set unless they have size as a distinctive feature, (see below pp.61 and 64). Unlike some nouns of other classes, class 1 nouns have the same tone patterns in singular and plural as follows:

1a  óbádo  bībā dibā  (the chief - s)
o kpele  bikhēlibā  (the older sib -s)
o maano  bimaaba  (the blacksmith -s)
1b  ónīlo  binība  (the person - s)
o mado  bimādibā  (the new mother -s)
o wābō  bīwāba  (the cripple -s)
1c  ócuādo  bīcuādibā  (the in-law -s)
o yiado  bīyiādibā  (the maternal uncles -s)
o puă  bīpuōba  (the woman -women)
ld ojá bijába (the man -men)

This last noun, ojá (the man), and the last noun cited in lc, ópuá (the woman), have a zero suffix in the singular, but have regular affixes in the plural.

Many nouns in class 1 are related to their corresponding verbs as performer, e.g., ócuádó (the in-law) in lc above is one who has successfully courted a girl; compare:

ó l'cúad o (he has courted her with gifts)

Class 1 nouns have alternate plural affixes a -a which may sometimes be used instead of the bi -ba affixes if a general or professional group rather than a specific group or several specific individuals is designated:

áyiádá (maternal uncles, as a class)
bíyiádíbá (the maternal uncles, previously mentioned, awaited, etc.)

Some class 1 nouns are heard in the plural with the a -a affixes. These are often nouns that refer to unfortunates:

ówábó áwába (the cripple -s)
óyiámó áyiáma (the sick person -s)
ógbáadó ágbáadá (the leper -s)

A very few nouns with the feature +human not belonging to class 1 but to class 2 have been recorded, e.g.,

óyómbo íyómbí (slave -s)

Both the paired affixes and the tonal pattern of this noun indicate class 2 rather than class 1.
Class 2 nouns. The class 2 o–o, i–i nouns have the distinctive semantic features +animate, -human. A few class 2 nouns have a zero suffix in the singular, and the suffix -e, rather than -i, in the plural. They have been treated as a sub-class of class 2 rather than a separate class because they have the distinctive features +animate, -human, and occur with the same tonal patterns as class 2 nouns.

Class 2 nouns, unlike class 1 nouns, generally have a plural tonal pattern differing from the singular. Only one pattern was observed which remains constant in singular and plural. The subsets of class 2 nouns are as follows:

2a óguábo  ìguábi  (the goat - s)
    óluómó  ìluómí  (the elephant - s)
    ókáabó  ìkáabí  (the big bird - s)

2b óboódo  ìboódi  (the python - s)
    ònánlo  ìnánli  (the guinea worm - s)
    ólibó  ìlibí  (the hippopotamus - es)

2c ótāamo  ìtāami  (the horse - s)
    óŋümbo  ìjümblí  (the donkey - s)
    óduoló  ìduőli  (the pig - s)

2d óboádioa  ìboádíloē  (the earthworm - s)
    ópia  ìpē  (the sheep)
    óyuā  ìyoē  (the iguana that enters the water)

---

1 Some common nouns occur in this class which outlanders would not consider animate, e.g., onmaalo (the moon).
Class 3 nouns. The class 3 o - u, i - i nouns have the feature +animate. No other semantic feature appears to be shared by the whole class. Several nouns share the features +long, +slender, e.g.,

- ìsànu (the road)
- ìpìěmu (the arrow)
- ìbẹnu (the branch)
- ìjiinu (the root)
- ìbààbú (the rope)
- ìgaalu (the thread)

Other nouns have the feature +place, e.g.,

- ìkàanu (the place)
- ìdógú (the town)

Nouns in this class may relate to their corresponding verbs as qualitatives, e.g.,

- li yàbì (it is big)
- ìyàbìnù (the size)
- ìfìdì (he has been able)
- ìfìdù (the strength)

Nouns in this class may also relate to their corresponding verb as inanimate performer, e.g.,

- ìpiè (he has pierced)
- ìpièmu (the arrow)
- ìjìmbì (he has cleaned)
- ìjìanu (the broom)

Other small semantic groupings might be named, e.g., those sharing the feature, +body part, e.g.,

- ìnù (the hand)
- ìyàagù (the jaw)

In plurals the feature +food may occur, e.g.,

- ìmàanì (the okra)
- ìmùulì (the rice)

Class 3 nouns like class 1 nouns, have the same tonal patterns in the singular and the plural as follows:

1Tonal data lacking
3a  ōjīnū  ḫjiinī  (the root -s)
ośiēmū  ḫpiēmī  (the arrow -s)
oŋānū  ḫŋānī  (the broom -s)

3b  óbēnū  ibēnī  (the branch -es)
oŋpēnū  ḫikpēnī  (the stream -s)
oŋoāgū  ḫŋoāgī  (the grisgris)

3c  ōsānū  îsānī  (the path -s)
oćīmū  îćīmī  (the dye pit -s)
oşābū  îbābī  (the forceps)

3d  óduānū  îduānī  (the bed -s)
obāabū  îbāabī  (the rope -s)
ołāanū  îłāanī  (the necklace -s)

Class 4 nouns. The class 4-o-bu-bu, i - di nouns have the feature -animate. This class is noteworthy for containing the names of most trees. Among the other semantic groupings in this class are names of body parts, e.g., ōlāmbū, îlāndī (the tongue -s).

Many frequently occurring nouns have class 4 singular affixes paired with plural affixes of another class, e.g.,
oŋoābū  class 4 (mouth)  āŋoānā  class 6 (mouths)
obūmbū  class 4 (eye)  înūnī  class 3 (eyes)

Some nouns in this class have plural forms which differ from the regular class plural, e.g.,
ődībū  *īdīdī  ēdī  (the grain stalk -s)

Here, where the suffix is the same as the base, one of the reduplicated syllables is deleted; it is apparently the suffix tone and not the base
tone which is retained.

Some frequently used nouns with corresponding verbs have singular forms in this class but are never pluralized, the singular form being used with singular or plural meaning, e.g.,

ômiâbû (request -s)
ôpâabû (gift -s)
ôtoâbû (war -s)

The singular prefixes o-~bu- appear to be in free variation, o- being favoured by dwellers right in the capital, Fada N'Gurma, bu- by village dwellers.

Only one set of tonal patterns remains constant in singular and plural in class 4 nouns, the rest change.

4a  ôsââmbû  îsâândî  (the shea tree -s)
ofuobû  îfuödî  (the wild kapok tree -s)
oğââbû  îdaâdî  (the wild small fig tree -s)
4b  ôdûbû  îdûûdî  (the locust bean tree -s)
oğbêmbû  îgbêndî  (the kapok tree -s)
olämbû  îlándî  (the tongue -s)
4c  ôtîbû  îtíiîdî  (the tree -s)
oţûobû  îtuödî  (the baobab -s)
oçâbû  îcâbîdî  (the wild cherry tree -s)

Class 5 nouns. The class 5 o-~gu - gu, ti - di nouns have a variety of semantic groupings, e.g., +container, e.g.,

ôdûugû (locust bean pod)  ôtûgû (stomach)
oţiâgû (dish)  ôjôŋgû (compound for strangers)
+animate, e.g.,

osayobigu₁ (the bush rat)

+body part, e.g.,

óboāgū (the arm) ógbāngū (the skin)

The singular prefixes o-~gu- appear to be in free variation; o- is favoured by those living in the capital, Fada N'Gurma, gu- by village dwellers.

There are a number of nouns in this class which are generally used in the plural, e.g.,

tíbīdī (pus) tífādī (leaves)
tíkōbīdī (feathers) tímoādī (grass)
tīnāndī (meat) tīyūdī (hair)

While a singular generally exists, it seldom occurs.

Nouns in this class may have the distinctive feature +large. These nouns may or may not also have the feature +inanimate, e.g.,

ójaāgū (a big or strong man)
óyiēgū (a very large calabash)

Class five nouns recorded have the same tone pattern in singular and plural as follows:

5a ógbāngū tīgbāndī (the hide -s)
"óboāngū tīboāndī (the deep, large water hole -s)
"ódōāngū tīdōāndī (the flat-roofed house -s)

¹Data incomplete
5b  ódúugù  títúudí  (the locust bean pod -s)
    ók̩p̩íngù  títíp̩índí  (the greens plant -s)
    óp̩íngù  títíp̩índí  (the sleeping mat -s)

5c  ódãagù  tídaadí  (the piece -s of wood)
    ódiègù  tídièdí  (the compound -s)
    ótiágu  títiádí  (the dish -es)

Class 6 nouns. The class 6 li - li, -la, a nouns are very numerous and may have varied semantic features, e.g., +body parts:

<table>
<thead>
<tr>
<th>li-táalí</th>
<th>(the leg)</th>
<th>li-yúlí</th>
<th>(the head);</th>
</tr>
</thead>
<tbody>
<tr>
<td>+fruit or +vegetable:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>lísānlí</td>
<td>(the shea fruit)</td>
<td>lítúnlí</td>
<td>(the bean)</td>
</tr>
<tr>
<td>lítíinlí</td>
<td>(the peanut)</td>
<td>lífélí</td>
<td>(the squash)</td>
</tr>
<tr>
<td>+animate:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>líjúulí</td>
<td>(the owl)</td>
<td>lípølí</td>
<td>(the elf)</td>
</tr>
<tr>
<td>+tool:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>li-yálí</td>
<td>(the axe)</td>
<td>lítuolí</td>
<td>(the mortar)</td>
</tr>
<tr>
<td>+location:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>lídièlí</td>
<td>(the house)</td>
<td>lícálí</td>
<td>(the well)</td>
</tr>
</tbody>
</table>

The singular suffix variant -la is used for the noun libonla (the thing) and compounds in which this noun occurs when utterance final. When -la occurs medially, -la → -lí.

This class may have the distinctive feature +medium size in contrast with the class 5 feature, +very large, e.g.,

| líyèlí | a medium size calabash |
| oyiégu | a very large calabash |
Whether the plural suffix is \(-\text{la}\) or \(-\text{na}\) depends on the base. The suffix will be \(-\text{na}\) if the base is long:

a) because of a double vowel, e.g.,
   \(\text{ligāali} \quad \text{āgāanā} \) (the saddle \(-\text{s}\));

b) because of a vocalic on-glide e.g.,
   \(\text{litūolī} \quad \text{ātuōnā} \) (the mortar \(-\text{s}\));

c) because of a nasal off-glide, e.g.,
   \(\text{litānī} \quad \text{ātānā} \) (the stone \(-\text{s}\)).

But if the base vowel is short, the plural suffix will be \(-\text{la}\), e.g.,

\(\text{līfēlī} \quad \text{āfēlā} \) (the squash \(-\text{es}\))

\(\text{lītīlī} \quad \text{ātiľā} \) (the book \(-\text{s}\))

In this class the tonal patterns change in the plural. The short and long bases with corresponding suffixes are now shown:

\(\begin{array}{c}
6a_1 \quad \text{lītīlī} \quad \text{ātiľā} \quad \text{(the book \(-\text{s}\))}
\text{līfēlī} \quad \text{āfēlā} \quad \text{(the squash \(-\text{es}\))}
6a_2 \quad \text{līcāalī} \quad \text{ācāanā} \quad \text{(the well \(-\text{s}\))}
\text{lītuōlī} \quad \text{ātuōnā} \quad \text{(the mortar \(-\text{s}\))}
\text{līdūnlī} \quad \text{ādūnā} \quad \text{(the knee \(-\text{s}\))}
\text{lītīnlī} \quad \text{ātičnā} \quad \text{(the peanut \(-\text{s}\))}
6b_1 \quad \text{līpālī} \quad \text{āpālā} \quad \text{(the granary \(-\text{ies}\))}
\text{līpōlī} \quad \text{āpōlā} \quad \text{(the twin \(-\text{s}\))}
6b_2 \quad \text{līdīēlī} \quad \text{ādiēnā} \quad \text{(the house \(-\text{s}\))}
\text{lījuālī} \quad \text{ājuānā} \quad \text{(the hill \(-\text{s}\))}
\text{līsānīlī} \quad \text{āsānā} \quad \text{(the clay bowl \(-\text{s}\))}
\text{līgoānīlī} \quad \text{āgoānā} \quad \text{(the wall \(-\text{s}\))}
\end{array}\)
Class 7 nouns. The class 7 gi - ga, mu - mu nouns may have the semantic features inanimate, human. This is the class of small things, of the young, of diminutives.

Class 7: class 6 : class 5 :: small : medium : large.

The feature + small is contained in the affix pairs. gi - ga, mu - mu alone but diminutives are also formed by using the base of gībīgā (the child) in conjunction with the affix pairs, e.g.,

liliadili  (the shirt)  giliadibiga  (the little shirt)
litili  (the book)  gitibiga  (the little book)

In this class the tonal patterns generally change in the plural as follows:

7a gībīgā  múbīmū~ābīlā  (the child -ren)
gīyiēgā  múyiēmū  (the small calabash -es)
7b gīlōngā  mūlōmmu₁ (the little drum-s)
gīlōāngā  múlōāmmu₁ (the well"bucket" -s)

1 These two nouns are so accented in the data and do not conform to any of the common tonal patterns for simple nouns. Further observation will have to determine whether this tonal pattern is an error of transcription or indeed another tonal pattern.
Class 8 nouns. The class 8 mi-ma nouns refer to liquids and non-count quantities. Gerunds are generally formed using the affixes of this class. If the verb base ends in a nasal it will generally be retained, assimilated to the -m- of the class suffix.

The tonal patterns of this class are as follows:

8a  mītāmā  (the soil)  mīnīmā₁  (the water)
8b  mīsoāmā  (the blood)  mīkāpāmā  (the oil, the fat)
8c  mīyāmāmā  (the salt)  mīdāamā  (the dolo, i.e., beer)
8d  mījiēmā  (the food)  mījāammā  (the fete)

Class 9 nouns. The class 9 ḟ- ḋ, ḋ- mba nouns have a zero prefix and suffix in the singular, and a zero prefix in the plural. If the noun has one or two syllables, the final vowel will lengthen before the plural suffix -mba.

The noun mīnīma appears to be irregular. That its base is -mīn- is shown by any compound in which it appears, e.g., mīnīciamma (the great water, e.g., the sea,) but in its simple form the final nasal of this base -mīn- is not retained in a double -mm-. However, the base is not a known verb base, see above pg. 48).
A small subset of bound kin terms occurs in this class - most kin terms occur in class 1. These class 9 kin terms are generally used with the possessive, e.g., the bound term -ba (father) --- mba (my father). These terms occur singular or plural, e.g.,

- ba  -baamba (father -s)  -na  -naamba (mother -s)

- ya  -yaamba (grandmother -s)

- yaja  -yajaamba (paternal grandfather -s)

Any Gurma proper name may take the plural suffix _mba_ as follows:

Motaaba (boy's name) Motaabimba (Motaaba's chums, "gang", crowd, adherents.)

Tankpaali (man's name) Tankpaalimba (Tankpaali's followers, etc.)

Lompo (Gurma clan name) Lompoomba (a group of people from that clan)

Class 9 includes most foreign loan words and onomatopoeic words such as:

soje  soxeemba (soldier -s) mobili  mobilimba (automobile -s)

gbaăba  gbaăbaamba (duck -s) cece  ceceemba (sewing machine -s)

The tone on the plural suffix of such words is generally high followed by mid, _mba_.

Some loan words have apparently evoked a noun class singular sufficiently to be pluralized in that class, e.g.,

minteli (militaire)  amintela (soldier -s)

has regular class 6 plural affixes.

The following table, page 67, shows the noun classes with their affixes and tonal patterns.
### Tonal Pattern

<table>
<thead>
<tr>
<th>A --</th>
<th>B --</th>
<th>C --</th>
<th>D --</th>
<th>E --</th>
<th>F --</th>
<th>G --</th>
<th>H --</th>
</tr>
</thead>
</table>

#### Class 1
1. Singular o - o, plural bi - ba
   - obōdō (the chief)
   - obōnī (the guest)
   - ōjī (the man)
   - bīsāmba (the guests)
   - bījāba (the men)

2. Singular o - o, plural i - i
   - obōdō (the python)
   - obōbō (the goat)
   - ōsānō (the horse)
   - ōsānī (the pythons)
   - ōsānī (the snakes)

3. Singular o - o, plural i - i
   - obōnī (the bed)
   - ōkā (the branch)
   - ōsānī (the path)
   - ōsānī (the brooms)

4. Singular o - bu, plural i - di
   - obubu (the locust bean tree)
   - ōtubu (the locust bean trees)
   - ōtubu (the shea tree)

5. Singular o - gu, plural ti - di
   - odagū (the plank)
   - ōtagū (the l. b. pod)
   - ōtagū (the sleeping mat)
   - ōtagū (the hides)

6. Singular li CV'i, plural a - la
   - ťi (the book)
   - ťi (the granary)
   - ťi (the head)
   - ťi (the book)
   - ťi (the granaries)
   - ťi (the head)

7. Singular gi - ga, plural mu - nu
   - geyi (the calabash)
   - geyi (the knives)
   - geyi (the calabashes)
   - geyi (the drums)

8. Singular mi - na (non-count nouns)
   - mite (the soil)
   - mite (the salt)

9. Singular 0 - 0, plural 0 - na
   - foreign loan words and onomatopoeic words, tones uncertain

---

**Table of the Gurma Noun Class Affix and Concurrent Tonal Pattern System**

Table 3
The following chart (page 69), summarizes the tonal patterns occurring with the most common Gurma noun form, i.e., prefix + base + suffix, in both singular and plural. The numbers 1 - 9 indicate the noun class as listed on page 54 above and described on pages 55-66 above. The capital letters A - H indicate the tonal patterns described on page 55 above. A pattern that remains constant in singular and plural is listed first, a higher tone on the base is listed before a lower one.

Vowel change in nouns. If the suffix vowel of a simple noun not occurring utterance final is -o, or -a in a -ba, -ga, or -ma suffix, it will change to a higher, more fronted vowel, e.g.,

/ɔbádo cuà/ \rightarrow ɔbádi cuà (the chief has come)
/bínibɔ cuà/ \rightarrow bínibi cuà (the people have come)
/gibigà cuà/ \rightarrow gibiga cuà (the child has come)

If the following consonant is n, the vowel change will be to -i, e.g.,

/miįiémà nůkkî/ miįįemi nůkkî (the food smells bad)

The functions of the affix + tonal system. The prefix + suffix + tone system shown above has three functions:

a) it marks Gurma nouns for number. This may be done by suffix + tone alone, e.g.,

bē tuądi

(what is making a noise? donkeys (i.e., some donkeys);

or by prefix + suffix + tone, e.g.,

bē tuądi

(what is making a noise? the donkeys (i.e., certain, known donkeys).
Table 4: Table of Gurma Noun Tonal Patterns

<table>
<thead>
<tr>
<th>Class</th>
<th>Singular</th>
<th>Plural</th>
<th>Prefix Change</th>
<th>Base Change</th>
<th>Suffix Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>C - C</td>
<td>C - C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A - A</td>
<td>A - A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B - B</td>
<td>B - B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>D - D</td>
<td>D - D</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>C - C</td>
<td>C - C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A - F</td>
<td>F - F</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B - G</td>
<td>G - G</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D - E</td>
<td>E - E</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>H - H</td>
<td>H - H</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F - F</td>
<td>F - F</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>G - G</td>
<td>G - G</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>E - E</td>
<td>E - E</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>H - H</td>
<td>H - H</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td></td>
<td>C - F</td>
<td>F - F</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td></td>
<td>B - E</td>
<td>E - E</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>5</td>
<td>H - H</td>
<td>H - H</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C - C</td>
<td>C - C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B - B</td>
<td>B - B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>H - C</td>
<td>C - C</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H - B</td>
<td>B - B</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C - A</td>
<td>A - A</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>G - B</td>
<td>B - B</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B - D</td>
<td>D - D</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>C - H</td>
<td>H - H</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A - F</td>
<td>F - F</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td></td>
<td>B - G</td>
<td>G - G</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td></td>
<td>D - E</td>
<td>E - E</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>8</td>
<td>C - (non-count class)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A - A</td>
<td>A - A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B - B</td>
<td>B - B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>D - D</td>
<td>D - D</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Foreign loan words, tonal patterning uncertain</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
b) it marks Gurma nouns as definite or indefinite. As the illustrations for a) above show, the absence of the prefix marks the noun as -definite. If the prefix is used, the noun is marked as +definite. This marking is not just like that of the English definite article, but is analogous to it.

c) as has been discussed above, the prefix + suffix + tone system has semantic significance. The fact that tone contributes to this in some way is shown by the following minimal pairs:

<table>
<thead>
<tr>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>lípālī</td>
<td>ápālā (granaries)</td>
</tr>
<tr>
<td>lípālī</td>
<td>ápālā (hearts)</td>
</tr>
</tbody>
</table>

It may be significant that the tone on the base seldom changes, i.e., in two sub-sets of class 6 the tone on the noun base is higher and in one sub-set of class 7 lower in the singular than in the plural (see the table, pp. 69 above). There are changes in six sub-sets in the tone on the suffix, but in each case the tone is a step higher in the plural than in the singular. The changes in the prefix tone are more numerous. This tone is higher in the plural in the three sub-sets that change in class 2, and in all the class 7 sub-sets, and is lower in the plural in all the class 6 sub-sets.

It may be stated about the tonal patterns that the singular-plural tonal pattern pairing appears to be as regular and as predictable as the singular + prefix + suffix - plural + prefix + suffix pairing. It may further be stated that these tonal patterns will also change regularly and predictably,
a) when the noun prefix morpheme is replaced by the possessive morpheme, and

b) when the noun prefix morpheme is replaced by the relative morpheme. These changes are discussed after pronouns and the possessive morpheme are introduced below.

The Noun Sub-set, the Pronouns

The Gurma pronouns may be regarded as falling into two groups,

a) those that refer to first and second person, singular and plural, having the feature +human, and

b) those that refer to the third person singular and plural, i.e., the substitutes for the noun classes, having the feature +human.

The pronouns referring to the first and second person, singular or plural, occur with mid tone if they are S in an SVO sequence. The first person pronoun singular is a syllabic nasal homorganic with a following consonant. The other first and second person pronouns are given in the table below. If the first or second person pronouns are O in an SVO sequence, they occur with low tone.

The class 9 nouns are regularly referred to by the class 1 pronouns.

A pronoun referring to third person will be homophonous with the segments of the prefix or suffix of the noun to which it refers, but will always differ in the supra-segmental feature of tone from these affixes. If the third person pronoun stands before the verb,
i.e., if it is \( \text{S} \) in an \( \text{SVO} \) sequence, it will be homophonous with the prefix of the noun referred to. But whereas the tone on this noun prefix may be very high /'\( \text{u} \)/, or high /'\( \text{i} \)/, or mid /'\( \text{I} \)/, the tone on the pronoun is always low /'\( \text{I} \)/. If the third person pronoun stands after the verb, i.e., \( 0 \) in an \( \text{SVO} \) sequence, it will be homophonous with the suffix of the noun referred to, but, again, the tone will be different. The tone on the noun suffix may be high /'\( \text{i} \)/, or mid /'\( \text{I} \)/, the tone on the pronoun will always be low /'\( \text{I} \)/.

The third person object pronouns referring to \( \text{bi} - \text{ba} \) nouns, \( \text{gi} - \text{ga} \) nouns, and \( \text{mi} - \text{ma} \) nouns will change according to the rule given above, page 68, i.e., if not utterance final /\( \text{ba} \)/ \( \longrightarrow \)/\( \text{bi} \)/, /\( \text{ga} \)/ \( \longrightarrow \)/\( \text{gi} \)/, /\( \text{ma} \)/ \( \longrightarrow \)/\( \text{mi} \)/, e.g.,

\( \text{ô dèn soàn gà} \) (he sent it, i.e., giyiega - the calabash), but
\( \text{ô dèn soàn gi tontoni} \) (he sent it quickly).

The table below shows the forms of first and second person pronouns, singular and plural, subject and object; and third person, or noun class pronouns, singular and plural, subject and object. The first person singular pronoun has allomorphs \( \text{m-n-n-\( \text{n} \)} \) as it always assimilates to the following consonant; /\( \text{m} \)/ is chosen as the representative member because the negative first person pronoun is \( \text{mii} \). The second person singular pronoun object has allomorphs \( \text{a-\( \text{n} \)} \) in free variation.
Table of the Subject and Object Pronouns

<table>
<thead>
<tr>
<th>person</th>
<th>subject</th>
<th>object</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>sing.</td>
<td>plur.</td>
</tr>
<tr>
<td>1</td>
<td>m</td>
<td>ti</td>
</tr>
<tr>
<td>2</td>
<td>a</td>
<td>yi</td>
</tr>
<tr>
<td>3 class</td>
<td>o</td>
<td>bi</td>
</tr>
<tr>
<td>1</td>
<td>o</td>
<td>yi-bi</td>
</tr>
<tr>
<td>2</td>
<td>o</td>
<td>yi</td>
</tr>
<tr>
<td>3</td>
<td>o</td>
<td>yi</td>
</tr>
<tr>
<td>4</td>
<td>o-bu</td>
<td>yi</td>
</tr>
<tr>
<td>5</td>
<td>o-gu</td>
<td>ti</td>
</tr>
<tr>
<td>6</td>
<td>li</td>
<td>a</td>
</tr>
<tr>
<td>7</td>
<td>gi</td>
<td>mu</td>
</tr>
<tr>
<td>8</td>
<td>mi</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>o</td>
<td>bi</td>
</tr>
</tbody>
</table>

The Possessive Morpheme with Tonal Pattern

The possessive is identical with the segments of the pronoun subject. The tone of the possessive is either high or mid, so is always in contrast with the low tone of the independent noun class pronoun.

1These allomorphs are in free variation.

2Earlier written material has gu as the object pronoun for class 3 but this form has not been observed in the speech of the serveral Gurma colleagues who helped provide this data.
The possessive displaces the noun class prefix, i.e., it occurs before the noun base + suffix and co-occurs with one of five tonal patterns on this noun base + suffix. In all nouns observed, the gender class or sub-class tonal pattern was regularly replaced when a possessive replaced a class prefix.

The possessive patterns, labelled for convenience X, Y, Z, T, V are as follows:

<table>
<thead>
<tr>
<th>Pattern</th>
<th>possessive</th>
<th>noun base</th>
<th>gender suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>'</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>Y</td>
<td>'</td>
<td>&quot;</td>
<td>'</td>
</tr>
<tr>
<td>Z</td>
<td>-</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>T</td>
<td>-</td>
<td>&quot;</td>
<td>'</td>
</tr>
<tr>
<td>V</td>
<td>'</td>
<td>-</td>
<td>'</td>
</tr>
</tbody>
</table>

These patterns occur with first and second person as well as all noun class possessives in singular and plural. The first and second person possessive is segmentally identical with the pronoun it replaces, and will have mid or high tone according to the tonal pattern occurring on the noun base + suffix following. In the following examples only [hıs] is used, but any other possessive could be substituted without changing the pattern. The tone pattern is the same whether the noun occurs as S or as O in an SVO sequence.
Possessive pattern X.

Simple class tonal pattern

1A  ōbádō  (the chief)          1C  ócuádō  (the in-law)
2A  ónānlō  (the guinea worm)   2C  ōŋuābō  (the goat)
3F  ọŋoágú (the grisgris)      3H. sg.  ōŋuānū  (the broom)
6A  ọtīlā  (the books)         6F  ọyiemū (the calabashes)
7F  múyiemū (the calabashes)   7H. sg.  ọtībū (the tree)

Possessive pattern Y.

Simple class tonal pattern

.4B  sg.  bütībū  (the tree)    5B  sg.  ọtīágū  (the dish)
6G  sg.  ọyūlī  (the head)     5H  sg.  ọдоάggu  (the flat-roofed
7D  sg.  ọjūgà  (the knife)    house)
8D  mįjiemā  (the good)        1B  pl.  bīnībā  (the persons)
                               1C  pl.  bīcuādībā  (the in-laws)
                               A sub-set of this pattern occurs as  as follows:
                               5B  sg.  ọtīágū  (his dish)
                               5H  sg.  ọdoāggu  (his flat-roofed house)
                               1B  pl.  bīnībā  (his relatives)
                               1C  pl.  bīcuādībā  (his in-laws)

Possessive pattern Z

Simple class tonal pattern

1C  sg.  ócuádō  (the in-law)          1C  ócuádō  (his in-law)
2C  sg.  ōŋuābō  (the goat)           2C  ōŋuābō  (his goat)
3H. sg.  ōŋuānū  (the broom)          3H. sg.  ōŋuānū  (his broom)
7H pl. můwuůmmů (the rabbits)  ñwuůmmů (his rabbits)

A sub-set of this pattern occurs as

2H pl. ůguábī (the goats)  óguábī (his goats)
6C pl. ácuánā (the water pots)  ócuánā (his water pots)
2E pl. ítāamí (the horses)  ótāamí (his horses)
3E pl. íbaabí (the ropes)  óbáabí (his ropes)

Possessive pattern T

Examples of possessive pattern T: - ə " given below show its occurrence as O in an SVO sequence. When this pattern occurs as $ before the verb,

a) if the verb tone is either high or low,

b) if the verb tone is mid,

Simple class tonal pattern  Possessive tonal pattern

4C sg. ódúbů (the locust bean tree)  ñdúbů (his locust bean tree)
5C sg. ókpingū (the greens plant)  ókpingū (his greens plant)
6C sg. litílī (the book)  ótílī (his book)
7A sg. gībigā (the child)  óbigā (his child)
8A mǐpimā (the water)  ópimā (his water)
1A pl. bǐkpelībā (the older sibs)  ókpelībā (his older sibs)
5C pl. tipíndī (the sleeping mats)  ópíndī (his sleeping mats)
Possessive pattern V.

Examples of possessive pattern V: \( ' - \) given below show its occurrence as \( _{0} \) in an SVO sequence. When this pattern occurs as \( _{S} \) before the verb, there is no down-glide on the suffix. If the suffix is \(-\text{ba/}, \text{-ga/}, \text{-ma/}\), the final vowel will be fronted and higher and have a low tone rather than a falling glide; the vowels of other suffixes will not change, and the tone will be mid and level rather than a falling glide.

Simple class tonal pattern Possessive tonal pattern

\[ \begin{array}{ll}
1B & \text{sg. \( \text{ónīlō} \) (the person)} \\
& \text{ónīlō} (his relative) \\
3G & \text{sg. \( \text{ősānū} \) (the path)} \\
& \text{ősānū} (his path) \\
7B & \text{sg. \( \text{gīlōngā} \) (the drum)} \\
& \text{gīlōngā} (his drum) \\
6B & \text{pl. \( \text{áyālā} \) (the axes)} \\
& \text{áyālā} (his axes)
\end{array} \]

The following table shows the same data arranged to simple class pattern. The numbers show the noun class, the letters A – H the class patterns, and the letters X, Y, Z, T and V the possessive pattern.
Tonal patterns with possessive.

<table>
<thead>
<tr>
<th>Poss.</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>pattern</td>
<td>X</td>
<td>Y</td>
</tr>
<tr>
<td>simple</td>
<td>class</td>
<td>pattern</td>
</tr>
<tr>
<td>A</td>
<td>1,2</td>
<td>7,8</td>
</tr>
<tr>
<td>B</td>
<td>4,5,6</td>
<td>1,8</td>
</tr>
<tr>
<td>C</td>
<td>7,8</td>
<td>1,2</td>
</tr>
<tr>
<td>D</td>
<td>7,8</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>2,3</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>3</td>
<td>2,4,7</td>
</tr>
<tr>
<td>G</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>H</td>
<td>4,5,6</td>
<td>3</td>
</tr>
</tbody>
</table>

The bound possessive pronoun.

The possessive may also occur before the bound pronoun -cua. In this case possessive + -cua replaces possessive + base + suffix as in English "it" may replace "his book". English has no counterpart of this pronoun, -cua, which more accurately reflects the possessed noun it replaces than the indefinite pronoun "it" which English uses. This bound pronoun is concurrent with the class system as follows:
### The Relative Morpheme with Tonal Patterns

There are two co-occurring segmental relative morphemes: ya-, which replaces the relative noun prefix and precedes the noun base + suffix; and n, which precedes the verb to which this relative noun relates as either its subject or its object. There are four tonal patterns labelled O, P, Q and R which co-occur with these morphemes, replacing the noun class tonal patterns as follows:

<table>
<thead>
<tr>
<th>Relative pattern</th>
<th>relative noun base suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>P</td>
<td>-</td>
</tr>
<tr>
<td>Q</td>
<td>-</td>
</tr>
<tr>
<td>R</td>
<td></td>
</tr>
</tbody>
</table>

---

### Class

<table>
<thead>
<tr>
<th>simple affixes</th>
<th>bound pronoun</th>
</tr>
</thead>
<tbody>
<tr>
<td>sing.</td>
<td>plural</td>
</tr>
<tr>
<td>1 o - o</td>
<td>bi - ba</td>
</tr>
<tr>
<td>2 o - o</td>
<td>i - i</td>
</tr>
<tr>
<td>3 o - u</td>
<td>i - i</td>
</tr>
<tr>
<td>4 o - bu</td>
<td>i - di</td>
</tr>
<tr>
<td>5 o - gu</td>
<td>ti - di</td>
</tr>
<tr>
<td>6 li-li,-la</td>
<td>a - a</td>
</tr>
<tr>
<td>7 gi - ga</td>
<td>mu - mu</td>
</tr>
<tr>
<td>8 mi - ma</td>
<td></td>
</tr>
<tr>
<td>9 Ø - Ø</td>
<td>φ - mba</td>
</tr>
<tr>
<td></td>
<td>sing.</td>
</tr>
<tr>
<td></td>
<td>plural</td>
</tr>
<tr>
<td></td>
<td>-cuá</td>
</tr>
<tr>
<td></td>
<td>-cibu</td>
</tr>
<tr>
<td></td>
<td>-cil</td>
</tr>
<tr>
<td></td>
<td>-cigu</td>
</tr>
<tr>
<td></td>
<td>-cilù, -cila</td>
</tr>
<tr>
<td></td>
<td>-cigù</td>
</tr>
<tr>
<td></td>
<td>-cilù, -cigà</td>
</tr>
<tr>
<td></td>
<td>-cima</td>
</tr>
<tr>
<td></td>
<td>-cibi</td>
</tr>
<tr>
<td></td>
<td>-cibà</td>
</tr>
</tbody>
</table>
Examples are now given:

Relative pattern 0

- yâbâdô (the chief who -m)
- yayîégâ (the calabash which)

Relative pattern P

- yânîlô (the person who -m)
- yayîémá (the food which)

Relative pattern Q

- yacaanô (the stranger who -m)
- yajumû (the knives which)

Relative pattern R

- yànîlâ (the people who -m)
- yajênîlî (the egg which)

While ya- regularly occurs with mid tone, a preceding very high tone will draw this mid tone up to high tone.

If the relative noun is subject in its own clause, the particle n will immediately follow it and be on the same tone as the relative noun suffix. If however, the relative noun is object in its own clause, the particle n will precede the verb which governs the relative noun, and in this case the particle n will have a high tone, or a rising glide if the preceding tone is mid.

The following examples illustrate the possible positions of the relative noun with ya-, and the position of n:
The chief past + see who+the+child present+be the+house in
The chief saw the+child who was in the house.

The child whom the chief saw...

The old woman owns the child the chief saw.

The relative pronouns, concurrent with the noun class system are formed by adding to yaa-

a) the noun class prefix for S or
b) the noun class suffix for 0

in the SVO sequence.

In noun classes 1 and 2, $yaa- + o \rightarrow yua$

In the classes whose plural prefix is $i$, $yaa- + i \rightarrow yi$.

In class 6 plurals, $yaa- + a \rightarrow ya$

The relative pronoun regularly occurs with the mid tone.
A table of the relative pronouns follows:

<table>
<thead>
<tr>
<th>Class</th>
<th>Affixes</th>
<th>Relative Pronoun</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>sing.</td>
<td>plur.</td>
</tr>
<tr>
<td></td>
<td>subject</td>
<td>object</td>
</tr>
<tr>
<td></td>
<td>subject</td>
<td>object</td>
</tr>
<tr>
<td></td>
<td>subject</td>
<td>object</td>
</tr>
<tr>
<td></td>
<td>subject</td>
<td>object</td>
</tr>
<tr>
<td></td>
<td>subject</td>
<td>object</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>o - o</th>
<th>bi - ba</th>
<th>yua</th>
<th>yua</th>
<th>yaabí</th>
<th>yaabá</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>o - o</td>
<td>i - i</td>
<td>yua</td>
<td>yua</td>
<td>yí</td>
<td>yí</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>o - u</td>
<td>i - i</td>
<td>yu</td>
<td>yu</td>
<td>yí</td>
<td>yí</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>o - bu</td>
<td>i - di</td>
<td>yaabú</td>
<td>yaabu</td>
<td>yí</td>
<td>yí</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>o - gu</td>
<td>ti - di</td>
<td>yaagu</td>
<td>yaagu</td>
<td>yaadi</td>
<td>yaadi</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>li - li</td>
<td>a - a</td>
<td>yaalí</td>
<td>yaalí</td>
<td>yá</td>
<td>yá</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>gi - ga</td>
<td>mu - mu</td>
<td>yaagi</td>
<td>yaaga</td>
<td>yamú</td>
<td>yamú</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>mi - ma</td>
<td>a - a</td>
<td>yaami</td>
<td>yaami</td>
<td>yamá</td>
<td>yamá</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>ø - ø</td>
<td>ø - mba</td>
<td>yua</td>
<td>yua</td>
<td>yaabí</td>
<td>yaabá</td>
</tr>
</tbody>
</table>

The possessive pronoun.

These pronouns may be preceded by the possessive but they are then on high tone, not mid tone. The first person singular possessive occurring with these pronouns is syllabic, e.g.,

\[\text{ntíli} \quad \text{(my book)} \rightarrow \text{nyáali} \quad \text{mine, i.e., referring to any class 6 singular noun).}\]

The possessive pronoun thus formed, e.g., \[\text{nyáali} \quad \text{(mine)}\] does not seem to differ much semantically from the substitute pronoun discussed above, pg.79, e.g., \[\text{ncíli} \quad \text{(mine)}.\] The pronouns formed with yaa– probably emphasize the possessive features more than do the others.
The contrastive possessive pronoun.

If a contrast regarding possession, e.g., "mine" versus "yours" is to be indicated, the bound morpheme -ya- occurs between the possessive and the noun or pronoun, e.g.,

ǹbádó (my chief)  ñyábádó (my chief, i.e., not yours)

ñyuá (mine animate)  ñyáyuá (mine, i.e., not yours)

This bound possessive morpheme -ya- is in contrast to the relative morpheme ya- discussed above, pg. 80, by tone. The relative morpheme ya- occurs with mid tone, but may be drawn higher if preceded and followed by very high tone. The contrastive possessive morpheme -ya- occurs before noun bases with very high tone. However when this contrastive possessive -ya- occurs between the possessive and the pronoun, e.g., nyayua (mine), -ya- itself lowers to high tone, e.g., ōyuá (his) + -ya —→ ōyáyuá (his, i.e., not yours).

The Negative Morpheme with Tonal Patterns

Gurma sentences may be made negative by lengthening the vowel occurring immediately before the verb. When this vowel is the suffix vowel of the noun S in the SVO sequence it lengthens as follows:

a) Singular suffix

- o ——> -oo—ii
- pu ——> -uu
- li ——> -lii
- la ——> -lai
- ga ——> -gaii
- ma ——> -mai
- VØ ——> VVØ

Plural suffix

- ba ——> baa—a—ii
- i ——> -ii
- a ——> -aa
- mu ——> -muu

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b) a glide rising to high or very high occurs on the lengthened vowel.

c) if the following verb is on low tone, it will be drawn after the negative rising glide to a high tone as follows:

A  ṿóábóó  dàgídlí (the chief is getting on well)
    ṿóábó-oo   -íí  dàgídlí (the chief is not getting on well)

B  tídaadíí dàgídlí (the wood is o.k.)
    tídaadííí dàgídlí (the wood is not o.k.)

C  óguábóó  dàgídlí (the goat is good enough)
    óguáb-oo   -íí  dàgídlí (the goat is not good enough)

D  gíjúgá  dàgídlí (the knife is (sharp) enough)
    gíjúgaíí dàgídlí (the knife is not (sharp) enough)

E  ítámíí dàgídlí (the horses are (strong) enough)
    ítámííí dàgídlí (the horses are not (strong) enough)

F  múyiémmúú  dàgídlí (the calabashes are (big) enough)
    múyiémmúúú dàgídlí (the calabashes are not (big) enough)

G  ínee  dàgídlí (the cows are all right, e.g., as a courting gift)
    íneeí dàgídlí (the cows are not all right)

H  líjénlíí dàgídlí (the egg is (fresh) enough)
    líjénlííí dàgídlí (the egg is not (fresh) enough)

d) if the following verb occurs with mid tone, this changes to low tone after the negative rising glide, e.g.,

    ṿóábóó  kúníí (the chief has gone home)
    ṿóábóó-oo  kúníí (the chief has not gone home)
Itaami kuni (the horses have gone home)
Itaami fi kuni (the horses have not gone home)
Ine kuni (the cows have gone home)
Ine fi kuni (the cows have not gone home)

If the following verb has a high tone or a very high tone these will not be affected by the negative rising glide which will rise to about level with the following high or very high tone as follows:

Obado guani (the chief has come back)
Obado fi guani (the chief has not come back)
Itaami guani (the horses have come back)
Itaami fi guani (the horses have not come back)
Obado mia (the chief has drowned)
Obado fi mia (the chief has not drowned)
Ine mia (the cows have drowned)
Ine fi mia (the cows have not drowned)

If a personal pronoun substitutes for a noun as S in an SVO sequence, it too may express negation by lengthening its final vowel as follows:

M (I) --- mi (I ... not)
A (you) --- a na (you ... not)
Ti (we) --- ti (we ... not)
Yi (you) --- yi (you ... not)
<table>
<thead>
<tr>
<th>Class</th>
<th>singular</th>
<th>plural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>positive</td>
<td>negative</td>
</tr>
<tr>
<td>1</td>
<td>ó</td>
<td>wàá</td>
</tr>
<tr>
<td>2</td>
<td>ó</td>
<td>wàá</td>
</tr>
<tr>
<td>3</td>
<td>ò̈bù</td>
<td>bùú</td>
</tr>
<tr>
<td>4</td>
<td>ò~gù</td>
<td>bùú</td>
</tr>
<tr>
<td>5</td>
<td>lì</td>
<td>lìí</td>
</tr>
<tr>
<td>6</td>
<td>gì</td>
<td>gií</td>
</tr>
<tr>
<td>7</td>
<td>mì</td>
<td>mìí</td>
</tr>
<tr>
<td>8</td>
<td>ó</td>
<td>wàá</td>
</tr>
</tbody>
</table>

When the rising tone of the negative personal pronoun precedes a verb with low tone, it draws the first low tone up to a very high tone, e.g.,

ó kuàdì míyáamā (he has sold the salt)

wàá kuàdì míyáamā (he hasn't sold the salt)

ó tòngf mípímā (he has heated the water)

waa tòngf mípímā (he hasn't heated the water)

But if the verb occurs with mid tone or mid rising tone, or high, or very high tone, these tones remain unchanged after the negative rising glide of S, e.g.,

ó gāmbīdí (he is fixing)  waa gāmbīdí (he isn't fixing)

ó dāá́ (he has bought)  waa dāá́ (he hasn't bought)

ó diání (he has written)  waa diání (he hasn't written)

ó gāmbi (he has fixed) waa gāmbi (he hasn't fixed)
The Morphology of Gurma Verbs

Identification of Gurma Verbs

Gurma verbs may be identified by their occurring alone after a time marker preceded by S in an SV sequence.

If a Gurma 'évolué'¹ is asked, Qu'est-ce que c'est que le verbe aller en gourmantché? he will reply, Gëdī. This verb base form is homophonous with:

a) the form of the second verb in a series having the same subject the equivalent of the English infinitive, e.g., n buàa gëdī (I want to go);

b) the third person singular form of the perfective verb, the equivalent of the English present perfect, e.g., ò gëdī (he has gone).

Gurma verbs are generally monosyllabic, disyllabic or trisyllabic; one quadrisyllabic verb occurs in the data. All polysyllabic verbs end in -ī; monosyllabic verbs end in any vowel.

Marking of aspect in Gurma verbs.

Almost all of Gurma verbs are marked for aspect and have contrasting perfective and imperfective forms. However, there is a group of verbs whose base form is perfective even though semantically of a stative nature. Base forms of these verbs have no contrastive imperfective form.

Of one hundred Gurma verbs with contrastive perfective and

¹Gurmas are 95% illiterate. All formal education is in French. Those who are literate in French call themselves 'évolués.'
imperfective forms, chosen partly at random\textsuperscript{1}, one was quadrisyllabic, seventeen were trisyllabic, sixty-one were disyllabic and twenty-one were monosyllabic.

Fifty eight of these one hundred verbs differed in perfective and imperfective aspects by tone alone. Twenty-five of the remainder changed perfective to imperfective by adding a syllable ± tonal change in the imperfective. Twelve of the remainder changed perfective to imperfective by deletion ± tonal change. The remaining five had a suppletive form in the imperfective.

Of the fifty-eight verbs whose perfective and imperfective were distinguished by tone alone, thirty-two had the same tonal patterns in the perfective, and the same tonal patterns ± an alternate pattern in the imperfective. While this is not being suggested as the percentage of occurrence frequency in the language for this pattern, it probably shows a trend. One of these thirty-two verbs was quadrisyllabic, five were trisyllabic, eighteen were disyllabic and eight were monosyllabic. All polysyllabic verbs occurred with one of four endings. Of the twenty four polysyllabic verbs just mentioned eighteen ended in \textset{-di}, one in \textset{-gi}, two in \textset{-li} and three in \textset{-ni}. Of the eight monosyllabic verbs, six ended in \textset{-a}, two in \textset{-i}. The endings do not

\textsuperscript{1}Some verbs were included because they were different from most others; it is not felt that the figures give an accurate idea of syllabic distribution for verbs. Probably monosyllabics appear too numerous at the expense of disyllabics.
seem to have independent meaning.

The other twenty-six of the fifty-eight verbs which differed in perfective and imperfective aspects by tone alone had varying tonal patterns. Twelve of these verbs, three of them trisyllabic and nine disyllabic, ended in -di. Of six more disyllabic verbs, one ended in -gi, two in -li and three in -ni. The remaining eight verbs of this group were monosyllabic, six ending in -a and two in -i.

Of the forty-two remaining verbs, twenty-five followed this rule:

$$\text{perfective} + -\text{di} \pm \text{tonal change} \rightarrow \text{imperfective.}$$

This group of twenty-five verbs included nine whose perfective ends in -ni, and -ni + -di $\rightarrow$ -ndi in the imperfective. Of these twenty-five verbs, nine were trisyllabic, eleven were disyllabic, and five monosyllabic.

Of the remaining seventeen verbs nine disyllabic verbs followed a deletion rule to form the imperfective as follows:

$$\text{perfective} - -\text{ni} \pm \text{tonal change} \rightarrow \text{imperfective.}$$

Three other verbs deleted -ni or -li from the perfective and also replaced its base vowel with another vowel $\pm$ tonal change to form the imperfective.

The five remaining verbs had suppletive forms $\pm$ tonal changes in the imperfective.

On the basis of these data the following general statements may be made:

a) In about half of Gurma verbs the perfective base and the
contrasting imperfective are homophonous segmentally and distinguished by tone alone;

b) these verbs may be mono-, di-, tri- or quadrisyllabic;

c) if polysyllabic, these verbs generally end in \(-di, -gi, -li, -ni\);

d) various tonal patterns may make the distinction between perfective and imperfective, but some are much more common than others;

e) a perfective base may be changed to imperfective by the addition of a syllable with high tone ± tonal change on the base;

f) the syllables generally added to form the imperfective are \(-di, -gi, -li, or -ni\). Verbs ending in \(-di\) do not add \(-di\).

g) if the imperfective itself end in \(-ni\), then \(-ni + -di \rightarrow -ndi\), and \(-ni + -gi \rightarrow -ngi\) in the imperfective;

h) a small number of Gurma verbs delete the final syllable of the perfective and may or may not change the tone of the remaining segments to form the imperfective;

i) verbs of this type occurring in the data all ended in \(-ni\) or \(-li\)^1 - there was no example of \(-di\) being deleted - i.e.,

perfective \(-\{ni\} + \{li\}\) ± tonal change \(\rightarrow\) imperfective;

j) there are a few replacive verbs in Gurma;

k) some of these replace or add a vowel in the base of the perfective ± tonal change to form the imperfective;

^1Another perfective ending, i.e., \(-bi\), occurs in the data but did not appear in these hundred words.
1) some of these verbs, besides replacing a vowel in the base of the perfective, delete its final syllable and may or may not change tone on the remaining base segments to form the imperfective;

m) there are a few suppletive verbs in Gurma;

n) a few tonal patterns suffice for the great majority of verbs forming their imperfective from their perfective by any of the means mentioned above, i.e., tonal change alone, or addition, deletion, replacement, suppletion ± tonal change, but a number of tonal patterns other than these usual ones are also used.

The most common tonal patterns which distinguish between perfective and imperfective verbs are as follows:

a) perfective with final mid tone preceded by very high tone changes to imperfective with high tone ± an added syllable with high tone or + deletion

\[
\text{perfective with } \text{mid tone} \rightarrow \text{imperfective with high tone} \pm \text{an added syllable with high tone or + deletion}
\]

This pattern occurs in both monosyllabic and polysyllabic verbs.

b) perfective with low tone changes to imperfective whose final syllable, which may be an added syllable, has high tone preceded by low tone.

\[
\text{perfective with } \text{low tone} \rightarrow \text{imperfective with high tone preceded by low tone}
\]

This pattern occurs in both monosyllabic and polysyllabic verbs.

c) perfective with mid tone changes to imperfective with low tone ± final syllable with high tone:

\[
\text{perfective with } \text{mid tone} \rightarrow \text{imperfective with low tone} \pm \text{final syllable with high tone}
\]

This pattern occurs with disyllabics ± deletion.
d) perfective with high tone adds a syllable with high tone to form the imperfective:

\[
\text{perfective with }'\text{ ' } \rightarrow \text{ imperfective with }'\text{ ' } + \text{syl}
\]

This pattern occurs with polysyllabics.

Several other patterns are recorded in the data. While these patterns appear to be used by very few verbs, they are among the verbs most frequently used in the language.

Examples of tonal patterns for perfective and imperfective forms with or without concurrent addition, deletion, replacement and suppletion phenomena are now given in tabular form. Examples of those verbs that make distinction between perfective and imperfective by tonal change alone are given first; then those that have the feature of addition, then those that have the feature of deletion, then the replacement verbs and finally the suppletive verbs.

**Aspect marked by Tonal Change Alone**

In the following verbs tonal change alone marks the difference between perfective and imperfective. The pattern of change is "' - \(\rightarrow\) '".

<table>
<thead>
<tr>
<th>Perfective</th>
<th>Imperfective</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>quadrisyllabic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>coágímidí</td>
<td>coágímidí</td>
<td>to munch (as cattle do)</td>
</tr>
<tr>
<td>trisyllabic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>bábídí</td>
<td>bábídí</td>
<td>remove from between forceps, toes, etc.</td>
</tr>
<tr>
<td>cégídí</td>
<td>cégídí</td>
<td>loosen clenched teeth</td>
</tr>
</tbody>
</table>
Perfective disyllabic

γ’uudi
mudu

monosyllabic

cá
búu

A sub-set of verbs occurs in this pattern with an alternate imperfective pattern which appears to be in free variation with the one just given, i.e.,

perfective with ' — Imperfective with ' — '.

No semantic or phonetic reason for this variation has yet been discovered. Examples of these verbs are:

Perfective imperfective meaning

bóbídí bóbídí-bóbídí remove finery
fuóní fuóní-fuóní whistle

Examples of the second common tonal pattern which alone marks the difference between perfective and imperfective are now given. These verbs with low tones in the perfective change the final low tone to high tone in the imperfective, i.e., ' — Imperfective with ' — '.

Perfective imperfective meaning

trisyllabic

labídí labídí lie or lay face down
yémídí yémídí grumble
Examples of the third common tonal pattern which alone may mark the difference between perfective and imperfective are now given. These verbs with mid tone in the perfective change to low tone in the imperfective, i.e., \(- - \rightarrow \) \\

<table>
<thead>
<tr>
<th>Perfective</th>
<th>imperfective</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>kuàdî</td>
<td>kuàdì</td>
<td>sell</td>
</tr>
<tr>
<td>cuònì</td>
<td>cuònì</td>
<td>walk</td>
</tr>
</tbody>
</table>

Other less common tonal patterns which alone may mark the difference between perfective and imperfective occur on disyllabic verbs as follows:

a) perfective with mid followed by low tonal changes to imperfective with high tones; i.e.,

perfective with \(- - \rightarrow \) imperfective with \(' '\).

<table>
<thead>
<tr>
<th>Perfective</th>
<th>imperfective</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>dēlī</td>
<td>dēlî</td>
<td>chase</td>
</tr>
<tr>
<td>būlî</td>
<td>būlî</td>
<td>scratch shallow hole</td>
</tr>
</tbody>
</table>

b) perfective with low followed by high tone changes to imperfective with low tones, i.e.,

perfective with \(' ' \rightarrow imperfective with \(' '\).

<table>
<thead>
<tr>
<th>Perfective</th>
<th>imperfective</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>bīdî</td>
<td>bīdí</td>
<td>to stammer</td>
</tr>
<tr>
<td>bōdî</td>
<td>bōdí</td>
<td>to be stunted</td>
</tr>
<tr>
<td>Perfective</td>
<td>Imperfective</td>
<td>Meaning</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>bōbī</td>
<td>bōbl</td>
<td>dress (self) up</td>
</tr>
<tr>
<td>buābī</td>
<td>buābl</td>
<td>gallop</td>
</tr>
</tbody>
</table>

c) Perfective with low tones changes to imperfective with mid tones, i.e.,

\[
\text{perfective with } \text{ - - } \rightarrow \text{ imperfective with } \text{ -- .}
\]

<table>
<thead>
<tr>
<th>Perfective</th>
<th>Imperfective</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>nīdl</td>
<td>nīdī</td>
<td>wash, i.e., hands</td>
</tr>
<tr>
<td>fīdī’</td>
<td>fīdī</td>
<td>comb, i.e., hair</td>
</tr>
</tbody>
</table>

### Aspect Marked by Addition + Tonal Change

The following verbs use the feature of addition to show aspect.

Polysyllabic verbs that follow the common tonal pattern:

- Perfective with very high tone followed by mid tone \( \rightarrow \) imperfective with high tone, will add \(-\text{di}\) with high tone to the imperfective; a sub-set has two mid tones in the imperfective with added \(-\text{di}\) with high tone in free variation with the pattern of three high tones:

\[
\text{perfective with } \text{ - } \rightarrow \text{ imperfective with } \{',,\text{ syl } - - \text{ syl}\}
\]

<table>
<thead>
<tr>
<th>Perfective</th>
<th>Imperfective</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>trisyllabic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>bābīnī</td>
<td>bābīndī</td>
<td>take between forcep blades, toes, etc.</td>
</tr>
<tr>
<td>bōlīnī</td>
<td>bōlīndī–bōlīndī</td>
<td>destroy</td>
</tr>
<tr>
<td>disyllabic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>dīngī</td>
<td>dīngīdī</td>
<td>soften</td>
</tr>
<tr>
<td>ṇāmbī</td>
<td>ṇāmbīdī–ṇāmbīdī</td>
<td>repair, arrange, clean</td>
</tr>
</tbody>
</table>
The monosyllabic verbs following this pattern may add -di, -nì, -nil or -gi.

fàa  
faadi  
become light

gàa  
gàanì  
take from hand

cìa  
cìànì  
escape

mià  
miàgì  
submerge

The following verbs follow a tonal pattern which is used with the phenomenon of addition only: perfective verbs with high tone change to imperfective by the addition of a syllable with high tone. This added syllable will be -di for trisyllabic verbs and -di or gi for disyllabics.

<table>
<thead>
<tr>
<th>Perfective</th>
<th>Imperfective</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trisyllables + -di</td>
<td></td>
<td></td>
</tr>
<tr>
<td>koàbìgì</td>
<td>koàbìgìdí</td>
<td>shorten</td>
</tr>
<tr>
<td>Kpìlígì</td>
<td>Kpìlígìdí</td>
<td>smooth</td>
</tr>
<tr>
<td>Disyllables + -di</td>
<td></td>
<td></td>
</tr>
<tr>
<td>nuàgì</td>
<td>nuàgìdí</td>
<td>deepen</td>
</tr>
<tr>
<td>búùnì</td>
<td>búùndì</td>
<td>mix with water, i.e., earth, flour, cement</td>
</tr>
<tr>
<td>Disyllables + -gi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>bálì</td>
<td>bálìgì</td>
<td>gather up rubbish</td>
</tr>
<tr>
<td>boálì</td>
<td>boálìgì</td>
<td>smear on, (i.e., plaster)</td>
</tr>
<tr>
<td>ñúùnì</td>
<td>ñúùngì</td>
<td>pocket</td>
</tr>
</tbody>
</table>
Perfective  imperfective  meaning

disyllabics + -ni

báli  bálíní  hem
coábi  coábiní  nick, blaze

Verbs that follow the common tonal pattern: perfective with low tone → imperfective with low tone followed by high tone, vary this pattern when they add a syllable as the segments identical with the perfective base remain on low tone in the imperfective but the added syllable, -di, or -gi takes high tone:

perfective with ' ' → imperfective with ' ' + syl

Perfective  imperfective  meaning

trisyllabics + -di

bálági  bálágldí  heat a little
coáginí  coágíndí  weary

disyllabics + -df

nànní  nàandi  cook by boiling
cènì  cèndí  greet on arrival

disyllabic verbs + -gi

gbinì  gblígi  knot
còànì  coàngí  overhang

monosyllabic verbs + -df

bàa  bàadí  obtain
fìì  flidí  rise

Other less common patterns which use addition ± tonal change to mark the difference between perfective and imperfective are:
a) perfective with low tone followed by high tone changes to
imperfective with two low tones+di with high tone:

\[
\text{perfective with } \` \` \rightarrow \text{imperfective with } ` ` + sýl.
\]

<table>
<thead>
<tr>
<th>Perfective</th>
<th>Imperfective</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>tôŋgí</td>
<td>tôŋgídi</td>
<td>heat</td>
</tr>
<tr>
<td>bàmbí</td>
<td>bàmbídi</td>
<td>cajole</td>
</tr>
<tr>
<td>dùuní</td>
<td>dùundí</td>
<td>rub</td>
</tr>
</tbody>
</table>

b) Some disyllabic verbs with mid tone in the perfective change
both tones to low and add \{-di\} with high tone:

\[
\text{perfective with } -- \rightarrow \text{imperfective with } ` ` + -ni
\]

<table>
<thead>
<tr>
<th>Perfective</th>
<th>Imperfective</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>bìbi</td>
<td>bibíni</td>
<td>pounce on</td>
</tr>
<tr>
<td>bīligí</td>
<td>bīligídi</td>
<td>get dark</td>
</tr>
</tbody>
</table>

A sub-set of these verbs changes to low tone in the imperfective
and may or may not add -ni with high tone:

<table>
<thead>
<tr>
<th>Perfective</th>
<th>Imperfective</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>bùgí</td>
<td>bùgí-bùgíni</td>
<td>carry on shoulder</td>
</tr>
<tr>
<td>gòlí</td>
<td>gòlí-gòlíni</td>
<td>wear as toga</td>
</tr>
</tbody>
</table>

Some monosyllables with mid tone in the perfective change mid tone
to low tone and add -di or -ni with high tone for the imperfective:

\[
\text{perfective with } - \rightarrow \text{imperfective with } \{-di\} \{-ni\}
\]

<table>
<thead>
<tr>
<th>Perfective</th>
<th>Imperfective</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>bií</td>
<td>blídí</td>
<td>darken, fall, i.e., of night</td>
</tr>
<tr>
<td>ñmãa</td>
<td>ñmãadí</td>
<td>step on</td>
</tr>
</tbody>
</table>
Aspect Marked by Deletion ± Tonal Change.

A small number of Gurma verbs mark aspect by deletion of the final syllable. This may or may not be accompanied by tonal change.

In the following verbs the perfective with low tone followed by high tone changes to imperfective when the final syllable is deleted; the remaining syllable stays on low tone:

Perfective  imperfective  meaning
monosyllabics + -nì

\[ \begin{array}{ll}
\text{cìi} & \text{clìnì} \quad \text{gambol} \\
\text{bie} & \text{bìnì}^{1} \quad \text{belch}
\end{array} \]

In the following verbs the perfective with high tones changes to imperfective when the final syllable is deleted: the remaining syllable has very high tone and down glide, and its vowel shortens:

Perfective  imperfective  meaning

\[ \begin{array}{ll}
\text{bùnì} & \text{bù} \quad \text{consult} \\
\text{cènì} & \text{cè} \quad \text{cut, i.e., with scythe}
\end{array} \]

\[ \begin{array}{ll}
\text{bùnì} & \text{bù} \quad \text{mix with water, i.e., earth, flour cement} \\
\text{nùnì} & \text{nù} \quad \text{pocket}
\end{array} \]

\[ ^{1}\text{SIC} \quad \text{one would have expected bìnì; this datum may be faulty, or the verb irregular.}\]
This deletion pattern for these two verbs is an alternate for the addition of -di or -gi with high tone as shown on page 96. These variant patterns seem to be in free alternation; no reason has been found for the variation.

In the following disyllabic verbs the perfective with mid tone changes to the imperfective with low tone when the final syllable is deleted:

perfective with \[- - -\text{yll} \rightarrow\text{imperfective with}\'].

<table>
<thead>
<tr>
<th>Perfective</th>
<th>Imperfective</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>dōnī</td>
<td>dō</td>
<td>climb</td>
</tr>
<tr>
<td>pānī</td>
<td>pā</td>
<td>pay</td>
</tr>
</tbody>
</table>

Aspect Marked by Replacement ± Tonal Change.

Tonal patterns cited above are generally used with replacement. The most common pattern: perfective with \"\-\-\rightarrow\text{imperfective with}\'\' is used with replacement and addition of \-li\ in these verbs:

<table>
<thead>
<tr>
<th>Perfective</th>
<th>Imperfective</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ciē</td>
<td>cēnlī</td>
<td>break (as twig, string)</td>
</tr>
<tr>
<td>ciā</td>
<td>cānlī</td>
<td>escape</td>
</tr>
</tbody>
</table>

Another common tonal pattern used with replacement is that cited on pp. 96 and 97, perfective with high tone changes to imperfective with high tone + -gi:

perfective with \'\' \rightarrow\text{imperfective}\'\' \pm -gi
Perfective  imperfective  meaning

díáñí  dángí  write
wááñí  wángí  tell (for someone)

Another common tonal pattern, that cited on p. 97, perfective with low tone \(\rightarrow\) imperfective with low tone + a syllable with high tone, is probably reflected in the following verbs, one of which replaces the consonant of the final syllable, while both have replacive vowels:

<table>
<thead>
<tr>
<th>Perfective</th>
<th>imperfective</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>cédì</td>
<td>cëñí</td>
<td>leave (off)</td>
</tr>
<tr>
<td>bìni</td>
<td>bìni</td>
<td>bow the head</td>
</tr>
</tbody>
</table>

The following verb resembles the pattern on page 99 where perfective with low tone followed by high tone changes to imperfective when the final syllable is deleted. However, in this verb the vowel in the imperfective lengthens:

<table>
<thead>
<tr>
<th>Perfective</th>
<th>imperfective</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>bůlì</td>
<td>bůu</td>
<td>plant</td>
</tr>
</tbody>
</table>

The following verbs resemble the pattern on page 100, perfective with mid tone changing to imperfective with low tone and deletion of the final syllable. Deletion co-occurs with this pattern in these verbs:

<table>
<thead>
<tr>
<th>Perfective</th>
<th>imperfective</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>bōñí</td>
<td>boè</td>
<td>chat</td>
</tr>
<tr>
<td>wāli</td>
<td>wù</td>
<td>bathe</td>
</tr>
</tbody>
</table>

Two replacive verbs have been recorded with a tonal pattern not
yet used; they have perfective with high tone and down glide changing to imperfective with replacement of the vowel and low tone:

<table>
<thead>
<tr>
<th>Perfective</th>
<th>Imperfective</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>cuô</td>
<td>çô</td>
<td>seize</td>
</tr>
<tr>
<td>jiâ</td>
<td>jå</td>
<td>saw</td>
</tr>
</tbody>
</table>

Another tonal pattern not yet cited occurs with these verbs that have perfective with mid tone and up-glide changing to imperfective with shortened vowel and low tone:

<table>
<thead>
<tr>
<th>Perfective</th>
<th>Imperfective</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>dâa'</td>
<td>dà</td>
<td>buy</td>
</tr>
<tr>
<td>maa'</td>
<td>mà</td>
<td>build (in mud)</td>
</tr>
<tr>
<td>pünî</td>
<td>pùunî</td>
<td>give</td>
</tr>
</tbody>
</table>

This last verb follows the same tonal pattern but lengthens the vowel in the imperfective rather than shortening it.

A few Gurma verbs have suppletive forms; they are among verbs that occur most frequently in the language. In general they follow tonal patterns already cited.

The following verbs follow the tonal pattern just cited for dâa' (buy). The perfective has mid tone followed by high tone; the suppletive form has two low tones:

<table>
<thead>
<tr>
<th>Perfective</th>
<th>Imperfective</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>sâni'</td>
<td>tînî</td>
<td>run</td>
</tr>
<tr>
<td>soâni</td>
<td>tùunî</td>
<td>work</td>
</tr>
</tbody>
</table>

The verb gedî (to go) follows the most common of all verbal patterns cited on page 92; the perfective has very high tone followed by mid tone; the suppletive form in the perfective has only one syllable
with high tone:

<table>
<thead>
<tr>
<th>Perfective</th>
<th>Imperfective</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>gedî</td>
<td>cá</td>
<td>go</td>
</tr>
<tr>
<td>gedînî</td>
<td>càanî</td>
<td>cause to go</td>
</tr>
</tbody>
</table>

The verb gedî (go) has a repetitive form which differs from the imperfective, i.e., cá, to go repeatedly.

The following verbs follow the common pattern cited on page 97; perfective with the low tone changing to imperfective with low tone + an added syllable with high tone.

<table>
<thead>
<tr>
<th>Perfective</th>
<th>Imperfective</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>soàngî</td>
<td>tàngîdî</td>
<td>care for as nurse</td>
</tr>
<tr>
<td>cuà</td>
<td>kpéndî</td>
<td>come</td>
</tr>
<tr>
<td>cuànî</td>
<td>kpéndînnî</td>
<td>cause to come</td>
</tr>
</tbody>
</table>

The imperfective of the last verb cuànî (cause to come) is irregular.

Inchoative - Causative Forms of Gurma Verbs.

Many Gurma verbs have inchoative forms with perfective and imperfective aspects. These forms may often have the meaning + causative.

Some base verbs have themselves a perfective form only. The inchoative perfective of these verbs derives from this perfective form by adding -di, -gi or -ni and follows one of the common tonal patterns already described. This inchoative perfective has its own imperfective derived from it by addition or replacement or suppletion occurring with tonal patterns already cited. No consistent distinctive derivational system for the inchoative has been observed except that it is generally formed by addition to the base form. The inchoative
can often be used both passively and transitively. If used passively, the agent cannot be expressed.

Examples grouped according to tonal patterns are now given:

<table>
<thead>
<tr>
<th>perfective with</th>
<th>inchoative perfective with</th>
</tr>
</thead>
<tbody>
<tr>
<td>'dī'</td>
<td>-gi</td>
</tr>
<tr>
<td>inchoative</td>
<td>perfective</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This inchoative perfective has a regular imperfective with

<table>
<thead>
<tr>
<th>perfective</th>
<th>inchoative</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>bānī¹</td>
<td>bāndī</td>
<td>learn</td>
</tr>
<tr>
<td></td>
<td>bāngī</td>
<td>teach</td>
</tr>
<tr>
<td>moānī¹</td>
<td>moāndī</td>
<td>become, or make red</td>
</tr>
<tr>
<td>cúubī¹</td>
<td>cúbindī</td>
<td>become, or make straight</td>
</tr>
</tbody>
</table>

Another tonal pattern not yet cited closely resembles the one above. A monosyllabic verb with high tone and falling glide forms

---

1The tonal pattern is so marked, i.e., high + low, but the data for defective verbs in this tonal pattern only is confused; it seem possible even likely, that the tone should be marked very high + mid: " -"
an inchoative perfective by changing to high level tone and adding

-iligí with high tone; its imperfective inchoative adds -di with high
tone:

<table>
<thead>
<tr>
<th>Perfective</th>
<th>meaning</th>
<th>inchoative perfective</th>
<th>inchoative imperfective</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>sâ</td>
<td>be</td>
<td>sálígí</td>
<td>sálígídí</td>
<td>become, or make insipid</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mí</td>
<td>be sour</td>
<td>mílígí</td>
<td>mílígídí</td>
<td>become, or make sour</td>
</tr>
</tbody>
</table>

Perfective verbs with mid tone may form an inchoative perfective
with very high tone followed by mid tone ± an added syllable with mid
tone. The imperfective inchoative will have high tone:

<table>
<thead>
<tr>
<th>Perfective</th>
<th>meaning</th>
<th>inchoative perfective</th>
<th>inchoative imperfective</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>bia̯</td>
<td>be evil</td>
<td>biágí</td>
<td>biágídí</td>
<td>become, or make corrupt</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>máni̯</td>
<td>be sharp</td>
<td>mángí</td>
<td>mángí</td>
<td>become, or make sharp</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nagí̯</td>
<td>be near</td>
<td>nágíni̯</td>
<td>nágingí</td>
<td>become, or make near</td>
</tr>
</tbody>
</table>

Perfective monosyllabic verbs with mid tone may form an inchoative
perfective by changing to low tone and adding a syllable with high tone;
the vowel of the perfective may also change:

<table>
<thead>
<tr>
<th>Perfective</th>
<th>meaning</th>
<th>inchoative perfective</th>
<th>inchoative imperfective</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>bii̯</td>
<td>be dark</td>
<td>blígí</td>
<td>blígídí</td>
<td>become, or make dark</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>goa</td>
<td>be asleep</td>
<td>guàñí</td>
<td>guàndí</td>
<td>go, or put to sleep</td>
</tr>
</tbody>
</table>

Perfective verbs with mid tone may form an inchoative perfective
by changing to low tone and adding a syllable with low tone. The imperfective inchoative will add a syllable with high tone:

<table>
<thead>
<tr>
<th>Perfective meaning</th>
<th>Inchoative perfective</th>
<th>Inchoative imperfective</th>
<th>Perfective meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>coəgi be weary</td>
<td>coəgini</td>
<td>coəgindi become, or make weary</td>
<td></td>
</tr>
<tr>
<td>yiə be ill</td>
<td>yiəgi</td>
<td>yiəgidı become, or make ill</td>
<td></td>
</tr>
<tr>
<td>də be level</td>
<td>dəgini</td>
<td>dəgindi become, or make level</td>
<td></td>
</tr>
</tbody>
</table>

Perfective verbs with low tone may change to an inchoative perfective with very high + mid tone. Imperfective inchoatives in this set have the variant pattern ' ~ ' (see above page 93).

<table>
<thead>
<tr>
<th>Perfective meaning</th>
<th>Inchoative perfective</th>
<th>Inchoative imperfective</th>
<th>Perfective meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>pə be well</td>
<td>pəagi</td>
<td>pəagidi become, or make well</td>
<td></td>
</tr>
<tr>
<td>piəni be white</td>
<td>piəndi</td>
<td>piəndi become, or make white</td>
<td></td>
</tr>
<tr>
<td>əgbəŋi be fat</td>
<td>əgbəngi</td>
<td>əgbəngidi become, or make fat</td>
<td></td>
</tr>
</tbody>
</table>

The following perfective verbs with low tone simply add a syllable with low tone for the inchoative perfective, and change the final tone to high tone for the inchoative imperfective:

<table>
<thead>
<tr>
<th>Perfective meaning</th>
<th>Inchoative perfective</th>
<th>Inchoative imperfective</th>
<th>Perfective meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>foəgi be tall</td>
<td>foəgidi</td>
<td>foəgidi become, or make tall</td>
<td></td>
</tr>
<tr>
<td>boəni be black</td>
<td>boəndi</td>
<td>boəndi become, or make black</td>
<td></td>
</tr>
</tbody>
</table>
The following perfective verbs with low tone form the inchoative perfective by changing final low tone to high tone; the inchoative imperfective adds a syllable with high tone preceded by low tone.

<table>
<thead>
<tr>
<th>Perfective meaning</th>
<th>Inchoative perfective</th>
<th>Inchoative imperfective</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>juąģį</td>
<td>juąģį</td>
<td>juąģį</td>
<td>be hard</td>
</tr>
<tr>
<td>kùugį</td>
<td>kùugį</td>
<td>kùugį</td>
<td>be cool</td>
</tr>
</tbody>
</table>

Many Gurma verbs with both perfective and imperfective aspects have a corresponding inchoative perfective with its own imperfective. These verbs occur in every tonal pattern and manifest all the features of verb formation already discussed so only three examples are given:

<table>
<thead>
<tr>
<th>Perfective imperfective meaning</th>
<th>Inchoative perfective</th>
<th>Inchoative imperfective</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>cõgį</td>
<td>cõgį</td>
<td>cõgį</td>
<td>read</td>
</tr>
<tr>
<td>gédi</td>
<td>cá</td>
<td>gédi</td>
<td>go</td>
</tr>
<tr>
<td>bôbi</td>
<td>bôbi</td>
<td>bôbi</td>
<td>dress up</td>
</tr>
</tbody>
</table>

Reversive Forms of Gurma Verbs

This last verb, bôbi (cause to dress up) is an example of a group of Gurma verbs that share the feature of having reversive forms. The one form generally ends in -ni while the other, the reversive, generally ends in -di. Each form has its own perfective and imperfective aspect.

Only a few examples of this very common phenomenon are now given:
<table>
<thead>
<tr>
<th>Perfective</th>
<th>meaning</th>
<th>reversive</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>bàbínì</td>
<td>put in mouth</td>
<td>bàbìdì</td>
<td>take from mouth</td>
</tr>
<tr>
<td>bàbínì</td>
<td>take between toes</td>
<td>bàbìdí</td>
<td>remove from between toes</td>
</tr>
<tr>
<td>bûgînì</td>
<td>put a handle to</td>
<td>bûgìdí</td>
<td>come out, i.e., of a handle</td>
</tr>
<tr>
<td>boáginì</td>
<td>be side by side</td>
<td>boágìdí</td>
<td>separate</td>
</tr>
</tbody>
</table>

Some verbs with this phenomenon have the one perfective ending in -li with the reversive in -di, e.g.,

<table>
<thead>
<tr>
<th>Perfective</th>
<th>meaning</th>
<th>reversive</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>pîli</td>
<td>put on shoes, etc.</td>
<td>pìdzi</td>
<td>take off shoes, etc.</td>
</tr>
<tr>
<td>lôlì</td>
<td>tie</td>
<td>lôtti</td>
<td>untie</td>
</tr>
</tbody>
</table>

**Future and Imperative Forms of Gurma Verbs**

Two of the tonal patterns given above furnish most verbs with their future and imperative tonal patterns. These are patterns a) and d)

on page 91 and 92.

a) perfective with " - --> imperfective with ' ' +~ - ' 

d) perfective with ' ' --> imperfective with ' ' '.

Verbs following either of these two patterns have the same tone as the imperfective in both the future and the imperative, e.g.,

<table>
<thead>
<tr>
<th>Perfective</th>
<th>meaning</th>
<th>imperfective</th>
<th>future</th>
<th>impererative</th>
<th>perfective</th>
</tr>
</thead>
<tbody>
<tr>
<td>bàbínì</td>
<td>take between toes</td>
<td>bàbìndì ~ ~'</td>
<td>bàbínì ~ ~'</td>
<td>bàbínì ~ ~'</td>
<td></td>
</tr>
<tr>
<td>koábígì</td>
<td>shorten</td>
<td>koábígìdí</td>
<td>koábígì</td>
<td>koábígì</td>
<td></td>
</tr>
</tbody>
</table>

The future and imperative of these two verbs, though having the same tonal patterns as the present imperfective are themselves perfectives.
If an imperfective future, e.g., ḏ bāa koābig idi (he will keep on shortening) or an imperfective imperative, e.g., yā koābig idi (keep on shortening it) must be expressed, this will have the same tonal pattern as the perfective future or imperative. But the imperfective aspect of the future will be indicated by the imperfective future particle bāa, which is in contrast with the perfective future particle bā, (see below, p. 114); the imperfective imperative will be indicated by the imperfective imperative particle ya (see below, p. 115), in contrast to the perfective imperative which has no particle.

A sub-set of the verbs with perfective with very high followed by low tone, and imperfective with high tones have their future and imperative with tonal patterns like the perfective rather than the imperfective, e.g.,

<table>
<thead>
<tr>
<th>Perfective meaning</th>
<th>Imperfective future</th>
<th>Perfective imperative</th>
</tr>
</thead>
<tbody>
<tr>
<td>cogī</td>
<td>read</td>
<td>cogī</td>
</tr>
</tbody>
</table>

The corresponding inchoative verb cogini (cause to read) does not belong to this sub-set, but to the main set; i.e., its future and imperative tonal patterns are like the imperfective:

cogini cause to cogindi cogini cogini read

A sub-set of the verbs with present perfective and imperfective with high tone has future perfective and imperative perfective alike with high tone followed by low tone, e.g.
Perfective meaning imperfective future imperative
perfective perfective

dīnī write dāngī diānī diānī

A fairly common pattern (see above pp. 91 and 98) has present
perfective with mid tone and present imperfective with low tone ± a
syllable with low tone. The future and imperative of verbs with this
pattern have mid tone like the perfective as follows:

\[
\begin{array}{llll}
\text{Perfective} & \text{meaning} & \text{imperfective} & \text{future} & \text{imperative} \\
\hline
\text{perfective} & \text{perfective} & \text{perfective} & \text{perfective} & \text{perfective} \\
\end{array}
\]

\[
\begin{array}{llll}
\text{future} & \text{imperfective} & \text{perfective} & \text{imperative} \\
\hline
\text{perfective} & \text{perfective} & \text{perfective} & \text{perfective} \\
\end{array}
\]

fjmaa step on fhmāadī fīmāa  fīmāa
dōnī climb dō donī donī
dnī
dnī

A sub-set with a pattern very like the last one that adds a
syllable in the imperfective (see above page 98) has it imperfective
future and imperative not shown only by the particles as does the last
set, but also by an added syllable with high tone, e.g., (to pounce on)

future future imperative imperative
perfective imperfective perfective imperfective
bā bībī bāa bībīnī bībī yā bībīnī

A sub-set of a few very frequently occurring verbs with perfective
with mid tone and imperfective with vowel shortening and low tone has
future and imperative with mid tone as follows:

Perfective meaning imperfective future imperative
perfective perfective

dāā buy dā dā
dā dā
dā dā
dā
dā
dā

Two verbs with this tonal pattern have the one a suppletive, the other
a replacive form in the future and imperative, i.e.,

dīnī eat dī jē jē

\[
\begin{array}{llll}
\text{future} & \text{imperfective} & \text{perfective} & \text{imperative} \\
\hline
\text{perfective} & \text{perfective} & \text{perfective} & \text{perfective} \\
\end{array}
\]

punī give pūnī pā pā
A sub-set of this pattern that has perfective with mid tone and imperfective with low tone ± either deletion or replacement (see above pg. 101) has high tone in the future and imperative as follows:

Perfective meaning imperfective future imperative

bonī chat boē boē boē

The large group of verbs with present perfective with low tone and present imperfective ± an added syllable with high tone has future with very high tone followed by mid tone, and imperative with mid tone followed by high tone as follows:

Perfective meaning imperfective future imperative

ŋàanīcook by ŋàandi ŋàani ŋàani
boiling

A sub-set of verbs with present perfective with low tone and present imperfective with low tone with final syllable with high tone, also has the future with very high tone followed by mid tone like the pattern above, but differs from it in the imperative which has low tone:

kuādī sell kuādī kuādī kuādī

Another sub-set of verbs with present perfective with low tone, and present imperfective with low tone with final syllable with high tone (see above pg. 97), has the imperative with mid tone. The future, instead of having very high tone followed by mid-tone, like the last set, has future with low tone but an up-glide rising to very high on the future time marker which precedes the verb, (see below page 114 as follows):
Perfective meaning imperfective future imperative
    perfective perfective

Cua come kôndi bà. cua cuā

A less common pattern with present perfective with low tone and
present imperfective with mid tone (see above pg. 95), has future with
low tone again preceded by the future particle with mid tone and a very
high rising glide, and imperative with mid tone as follows:

nidi wash nìdī bà nìdī nìdī

(Hands)

Another less common pattern has present perfective with low tone
followed by high tone and present imperfective with low tone and high
tone on an added syllable, (see above pg. 98) has future with high
tone followed by low tone, and imperative with ':

Perfective meaning imperfective future imperative
    perfective perfective
tôngi heat tônglìdī tôglī tôglı

The table on the following page (113) gives examples of verbs and
the tonal patterns observed in present perfective, present imperfective,
future perfective and imperative perfective.

Verbal particles. Gurma verbs are always marked for non-present
time by particles which precede the verb. The present perfective, the
present imperfective and the imperative are unmarked for time. All
other tenses are marked by particles.

There are two markers for past tense: bi indicates immediate past,
not farther back than the same half day; den indicates other past time.
These particles occur with mid tone which is influenced very little by
environment. The nasal of den is homorganic with the following con-
Table of Gurma verb tonal patterns showing perfective, imperfective, future and imperative. Table 5.

<table>
<thead>
<tr>
<th>Perfective</th>
<th>Imperfective</th>
<th>Future</th>
<th>Imperative</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>d̄ini</td>
<td>d̄ind̄i</td>
<td>d̄in̄</td>
<td>d̄in̄</td>
<td>feed</td>
</tr>
<tr>
<td>c̄og̲ini</td>
<td>c̄og̲indi</td>
<td>c̄og̲ini</td>
<td>c̄og̲ini</td>
<td>teach to read</td>
</tr>
<tr>
<td>c̄og̲i</td>
<td>c̄ogi</td>
<td>c̄ogi</td>
<td>c̄ogi</td>
<td>read</td>
</tr>
<tr>
<td>mà</td>
<td>mà</td>
<td>mà</td>
<td>mà</td>
<td>forge metal</td>
</tr>
<tr>
<td>koábígí</td>
<td>koábígíd̄i</td>
<td>koábígí</td>
<td>koábígí</td>
<td>shorten</td>
</tr>
<tr>
<td>diání</td>
<td>dângi</td>
<td>dián̄i</td>
<td>dián̄i</td>
<td>write</td>
</tr>
<tr>
<td>n̄úuní</td>
<td>n̄ú</td>
<td>n̄úun̄</td>
<td>n̄úun̄</td>
<td>pocket</td>
</tr>
<tr>
<td>ŋ̄n̄aa</td>
<td>ŋ̄n̄aad̄i</td>
<td>ŋ̄n̄aa</td>
<td>ŋ̄n̄aa</td>
<td>step on</td>
</tr>
<tr>
<td>b̄ig̲i</td>
<td>b̄ig̲íd̄i</td>
<td>b̄ig̲i</td>
<td>b̄ig̲i</td>
<td>darken</td>
</tr>
<tr>
<td>d̄ini</td>
<td>d̄i</td>
<td>j̄e</td>
<td>j̄e</td>
<td>eat</td>
</tr>
<tr>
<td>bōn̄i</td>
<td>bōe</td>
<td>bōe</td>
<td>bōe</td>
<td>chat</td>
</tr>
<tr>
<td>n̄aan̄i</td>
<td>n̄aad̄i</td>
<td>n̄aan̄i</td>
<td>n̄aan̄i</td>
<td>boil</td>
</tr>
<tr>
<td>kūd̄i</td>
<td>kūd̄i</td>
<td>kūd̄i</td>
<td>kūd̄i</td>
<td>sell</td>
</tr>
<tr>
<td>cūa</td>
<td>cūa</td>
<td>cūa</td>
<td>cūa</td>
<td>come</td>
</tr>
<tr>
<td>n̄id̄i</td>
<td>n̄id̄i</td>
<td>n̄id̄i</td>
<td>n̄id̄i</td>
<td>wash (hands)</td>
</tr>
<tr>
<td>t̄ög̲i</td>
<td>t̄ög̲idi</td>
<td>t̄ög̲i</td>
<td>t̄ög̲i</td>
<td>heat</td>
</tr>
</tbody>
</table>
sonant; it is always fully articulated. These markers are used with the present perfective and imperfective inflections to indicate past time.

A negative particle _gĩ_ may precede either of these particles. If it does, the noun or pronoun subject, _S_, will not have a negative form. The negative particle _gĩ_ appears to be in free variation with the negative form of _S_ (see above pp. 83 and 85).

The particle _dá_ (still) may occur before the imperfective, e.g., _ó dá cógĩ_ (he is still reading). The negative _dáa_ (not yet) may occur before the perfective, e.g., _ó dáa bándi_ (he doesn't know, i.e. hasn't learned, yet).

The future of Gurma verbs is indicated by particles which precede the verb, as well as by tonal changes. The future particles alone may distinguish between future perfective and future imperfective. The future perfective particle is _bā_ with mid tone. But if the verb following _bā_ has low tone, _bā_ will have a very high rising glide, e.g., _ó bā cuā_ (he will come).

The future imperfective particle is _bāa_ apparently in free variation with _bā ya_. The future negative perfective particle is _kán_. Both particles precede the verb. The future negative imperfective particles are _kán ya_. Except for the change of tone mentioned above for _bā_, tone on future particles is not greatly influenced by the environment.

The imperative has no marker in the perfective positive singular. The imperative plural, whether perfective or imperfective, positive or negative, has the particle _manĩ_ immediately after the verb. The
negative perfective imperative is marked by the preceding particle 
då; the negative imperfective imperative is preceded by 
då yá.

Examples follow:

cógi (read - sg.)       cógi mānī - (read - pl.)
då cógi (don't read - sg.)  då cógi mānī (don't read - pl.)
yá cógi (keep on reading - sg.) yá cógi mānī (keep on reading - pl.)
då yá cógi (don't keep on reading - sg.)
då yá cógi mānī (don't keep on reading - pl.)

The particle mānī has very high tone on the first syllable which causes a preceding high tone on the verb to be higher. But if mānī itself is preceded by a lower tone, its own tone may become lower. Tonal changes on the first syllable of mānī apparently determine the tone of the last syllable. More observations must be made before more detailed rules can be made about the tonal patterns with this particle.

When Gurma verbs occur in a series with a common subject:

a) the subject is not repeated,

b) any time marker occurs with the first verb and is not repeated,

c) the verbs are joined in one of two ways which appear to be in free variation:

i. the particle gi may occur between the verbs:

  ò dēn fî gi gêdî dëmpó. (He got up and went home)

ii) the vowel of the first verb may be lengthened:

  ò dēn fîf gêdî dëmpó (He got up and went home)

If there are three verbs in the series, and two are closely related, the lengthened vowel will occur between these two, and the particle gi will occur between one of these and the third verb:
(He got up and sneezed, and went home)

(He got up, and went home and ate).

Table of Noun and Verb Tonal Patterns Discussed. Table 6.

<table>
<thead>
<tr>
<th>Simple nouns</th>
<th>+Possessive</th>
<th>+Relative</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>&quot;</td>
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</table>

Verbs

<table>
<thead>
<tr>
<th>Perfective</th>
<th>Imperfective</th>
<th>Future</th>
<th>Imperative</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>&quot;</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Perfective</th>
<th>Imperfective</th>
<th>Future</th>
<th>Imperative</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>&quot;</td>
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</table>
Analysis of a Typical Gurma Sentence

This section will be limited to a brief discussion of Gurma grammar using examples in which the morphemes are embedded in authentic Gurma sentences. These examples will show some salient features of the language.

\[
\text{ó\text{'c'àan\text{'\text{k}oá\text{í}bí\text{í}dítí\text{'\text{\text{d}áadí\text{\text{g}}}í\text{í}bí\text{í}p\text{ó}}}.
\text{(the guest is shortening the stakes for the child)}.}
\]

The segmented sentence follows, then the words as they would occur in isolation are glossed, then the features of each word as glossed and as it occurs in the sentence are discussed.

\[
\text{o + 'caan + i + ( \text{ } \text{ } } + \emptyset + \text{\text{\text{k}oá\text{í}bí} + \text{\text{g}}}í + \text{d}í + ( \text{ } \text{ } } \text{ } + \text{\text{t}í} + \text{\text{\text{d}áa} + \text{\text{d}í} + ( \text{ } \text{ } } + \text{\text{g}}}í + \text{\text{b}í} + \text{\text{g}}}í + ( \text{ } \text{ } } + \text{\text{p}o} + ( \text{ } \text{ } ).}
\]

\[
\text{ó+\text{\text{c'àan}+\text{\text{g}}}ó \text{ guest + the + singular + animate}}
\]

\[
\emptyset \text{ zero time marker -- present}
\]

\[
\text{\text{\text{k}oá\text{í}bí+\text{\text{g}}}í+dí \text{ short + transitivizer + continuative}}
\]

\[
\text{\text{t}í+d\text{áa+d}í \text{ wood + the + plural + inanimate + collective}}
\]

\[
\text{\text{g}}}í+bí+g\text{á \text{ child + the + singular + small + animate}}
\]

\[
\text{p\text{ó} \text{ for}}
\]

Gurma sentences follow the order subject-verb-object, S V O. This can readily be seen if sentence 1 is written with its words as if in isolation, and with a gloss beneath:

\[
\text{ocaano koabigidi tidaadi gibiga po}
\]

the guest is shortening the stakes the child for
The verb koábigidi has several features characteristic of Gurma verbs:

a) it ends in \(-CV\) and \(-V\) is /i/. All Gurma polysyllabic verbs end in \(-C+i\) when sentence final.

b) It ends in \(-di\). The morpheme \(-di\) with high tone sometimes occurs in the verb base, but if it is an added suffix it almost always means + imperfective, as it does here.

c) The morpheme \(-di\) is preceded by the morpheme \(-gi\), which may also be part of the verb base; but if \(-gi\) is an added morpheme it may carry the meaning +causative, as it does here, i.e., koábi (to be short) + \(-gi\) \(\rightarrow\) koábigi (to shorten).

d) The verb koábigidi has its own tonal pattern, i.e., high + high + high + high, \(\uparrow+\uparrow+\uparrow\). In this verb no tonal contrast occurs with the perfective tonal pattern which is high + high + high, koábigi. As has been shown above (see p. 288) most Gurma verbs do have a tonal contrast between perfective and imperfective, the commonest pattern being:

perfective with \(\uparrow\uparrow\uparrow\uparrow\) \(\rightarrow\) imperfective with \(\dddot{\uparrow}\dddot{\uparrow}\). With probably more than half of all Gurma verbs tonal contrast alone distinguishes the perfective from the imperfective.

e) the stem koábi - is synonymous with the verb base, koábi (to be short). The sentence tídáadj koábi (the stakes are short) and the sentence tídáadj koábigi (the stakes have been shortened) are nearly synonymous, as they are in English. But the form koábigidi which has just been used passively is homophonous segmentally and supra-segmentally with the form koábigidi used in sentence 1. That is, this Gurma verb, like many others, may be used passively or actively. However, if it is used passively, the agent can not be expressed.
f) the verb koábígídí has a ø tense marker denoting present time in contrast with other tense markers, e.g., ócānní + bit + koábígídí + tidáadí (the guest was just now shortening the stakes) where bit is a tense marker denoting immediate past; it may be used with perfective or imperfective aspect, ócānní + baa + koábígídí tidáadí (the guest is going to be shortening the stakes), where baa is a tense marker denoting future used with the imperfective aspect.

The subject ócānnó, the actor, also has many of the characteristic features of Gurma nouns:

a) it begins and ends with phonetically identical segments, in this case o- and -o, and most Gurma nouns have phonetically similar, if not identical, affixes which occur in pairs, singular and plural.

b) the affix pair of the noun ocaano, o - o, has the meaning singular. If the meaning plural (-singular) were to be marked, the pair o - o would be changed to the pair bi - ba, e.g., bícáambá (the guests).

A table of the affix pairs, showing their double pairing for singular - plural is now given:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>o - o</td>
<td>ócānnó stranger 2 bi - ba bícáambá the strangers</td>
</tr>
<tr>
<td>1</td>
<td>o - o</td>
<td>ócuàdò in-law 3 aa - da ácuàdá the in-laws</td>
</tr>
<tr>
<td>4</td>
<td>o - ø</td>
<td>ójá man 2 bi - ba bíjábá the men</td>
</tr>
<tr>
<td>1</td>
<td>o - o</td>
<td>ótāamó horse 5 i - i ítāamí the horses</td>
</tr>
<tr>
<td>4</td>
<td>o - ø</td>
<td>ónuá cow 6 i - e ínè the cows</td>
</tr>
<tr>
<td>7</td>
<td>o - u</td>
<td>ósānú path 9 i - i ísānì the paths</td>
</tr>
<tr>
<td>8</td>
<td>bu - bu</td>
<td>ótibī tree 9 i - di ítīdí trees</td>
</tr>
<tr>
<td>10</td>
<td>gu - gu</td>
<td>ódāagū wood 11 ti - di tidāadí wood (collec.)</td>
</tr>
<tr>
<td>11</td>
<td>li - li</td>
<td>litili book 13 a - ta atila books</td>
</tr>
<tr>
<td>12</td>
<td>li - li</td>
<td>litili house 14 a - na adren houses</td>
</tr>
</tbody>
</table>
The prefix o- of the actor noun oćaano has determinative connotation. If two people in a hut hear a noise outside, one may say to the other, ӻǹée yé liikanì? (Who is there?). The latter may well reply, oćaano (the stranger) which is marked +determined by the affix, o-, and would indicate that a certain stranger, one already named, discussed, expected, etc., was there.

d) the affix pair, o-o, has the feature +animate, as do the affix pairs of classes 1, 2, 3, 4, 5, and 6. Only classes 2 and 3 are marked +human in this system of numbering.

e) the suffix -o which appears when oćaano is in isolation or in final position has changed to -i in this sentence where ocaano is closely linked to the following word. Phonetic change of an unstressed final noun vowel when the noun is not utterance final is characteristic for Gurma.

f) the tone pattern of the noun oćaano, high+ high+ mid, ' ' - may be described as having the feature -possessed. The form oćaano (the guest) is in contrast with the form oćaano* (his guest) solely through the contrast between the tonal pattern ' ' - and the tonal pattern - ' ' (high+high+mid is in contrast with mid+high+very high
+downglide, see pg. 74 above). The importance of tone distinctions in Gurma may be further shown by the four following look-alikes - no. 1 occurs in sentence No. 1, pg. 117.

1. ōcāānō the guest
2. ōcāānō his guest
3. ōcāānō he is accompanying him
4. ōcāānō he is visiting him

g) the base of the noun ōcāānō, -caan- is probably related to the imperfective form cāān of the verb cāān, (to visit, be guest of). This relationship is often found in Gurma nouns and verbs.

The second noun, tīdāādī (the stakes) the patient noun, is a member of noun class 1 as listed above. It has these characteristics:

a) its prefix ti- marks it as +definite; these are certain, known stakes.

b) the prefix ti also marks it as -animate

c) the affix pair ti - di mark it as -singular, i.e., plural.

d) the plural markers ti - di also mark this noun as possibly collective, many plurals in this class being viewed collectively rather than as count nouns, e.g., tīyūdī (hair), tīmuādī (grass).

e) the patient noun tīdāādī precedes gībīgā, the beneficiary of the action of the verb. This order is characteristic of Gurma syntax.

The third noun gībīgā has these characteristics:

a) its prefix gi- marks it as +definite; this is not just any child, but a certain one.

b) its affix pair gi - ga mark it as +singular.
c) this affix class, no. 16, is the class of small or young things \textit{animate}, so \textipa{gibiga} is marked as small or young, but not marked for the animate or the human feature.

d) the ending before \textit{po}, i.e., \textipa{-gi}, is not the one that would occur in isolation, i.e., \textipa{-ga}. It is characteristic of Gurma nouns ending in \textipa{-ga}, and also those ending in \textipa{-ma} and \textipa{-ba}, that 1) if they are not sentence or phrase final, 11) if they have not undergone a morphophonemic change, e.g., as for \textit{+possessed-} (see above, pp. 74 - 78) their final vowel changes to a higher more fronted vowel.

The word \textit{po} (for) is:

a) a postposition. It is characteristic of Gurma nouns that they occur with postpositions rather than with prepositions.

b) marked for tone, \textit{po} (for), mid tone. This keeps it clearly apart from the segmentally homophonous \textit{po} (to, from), which occurs with high tone.
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Grand Dictionnaire universel du XIX siècle, 1873, s.v. "Hannon".


Ideophones in Gurma

Anyone studying Gurma, though completely ignorant of linguistic trends, must be impressed by the frequent occurrence of words that seem different from all the other words in the language. The occurrence of such words, known as ideophones - idea sounds - as discussed by Samarin and Newmair is common to African languages.

A bibliography compiled by Professor Samarin listing materials containing information about ideophones has over one hundred items, the earliest having been published in 1850. That over seventy-five percent of the works listed have been published in the last twenty-five years shows the increased present interest in this category of words.

Among the names various authors have given to ideophones are onomatopoeic adverbs, intensifiers, mimic nouns, intensive interjections, affectifs, unités polyphonèmes, mots-images. Doke (1935:118) - who may have created the term - defines the ideophone as a 'vivid representation of an idea in sound'. Fortune (1955:421) defines it as 'a vivid or graphic exclamation, sometimes onomatopoeic, which indicates an action or manner of action, a state, colour, sound, smell, or sensation'. Kunene (1965:20) defines it as a dramatization of actions and states.

It is felt that the Gurma ideophones now listed may be but a small sampling of a fairly large class of words. But these few examples show why Gurma ideophones 'seem different' from other words in the language, and why such adjectives as 'vivid' and 'dramatic' are applicable. It should be mentioned before the words are read that they are to be thought of as being said with some added force or clearness or intonation that helps to make them stand out.
ideophone example (the gloss is underlined)

1. bāgli bāgli
   0 maadi bagi bagi. (He talks very much)
   0 kpaani bagi bagi. (He is proclaiming very loudly)

2. bèlf bèlf
   Li se beli beli (It stands very high)

3. bidà bidâ
   Mi ja bidâ bidâ (It, i.e., the water, is sputtering out).

4. bimm
   Li biigi bimm (It is very dark)

5. caöŋ
   Oyienu n kua yayogunu gu yen moandi caöŋ. (When the sun goes down it is often very red).

6. caöŋ
   Bee n tieni caöŋ yenî? (Asked when food dropped into hot fat - what made that sizzling noise?)

7. cap
   0 pundi gi sedi cap (He has arrived and stopped exactly (on) the line).

8. cas
   A maadi yenî cas (You have said exactly that).

9. cob(i) cob(i)
   Unglossed

10. cólî cólî
    Janli foagi colî colî (Janli is very tall)

11. cólî cólî
    Mipima pubi colî colî (The water drips constantly).

12. cólp cólp
    0 duugi colip colip (He limps along)

13. cólú cólú
    drop by drop

14. cóndî cóndî
    0 gbagidii diidi condi condi (He turned and looked all around)

15. cu(uuu) cu(uuu)
    Idi wutti cuuuu (The grain is running out fast).

    ii Gitaagi mi cuu cuu. (It is raining hard)

    iii Cu cu yogunu pia mikoma (Hard (raining) time has hunger, i.e., there is near famine during the rainy season).

    iv Okpaataali cu. (His pantlegs come right down (i.e., to his heels).

---

1 Tonal data are lacking for some of the ideophones and for all of the examples showing them in context.
16. dìndìnì        carefully
17. fàaaa        O noadi gijuga fàaaa (He has put the knife all
               the way into the scabbard).
18. fài fài       Li jùdì gì ìgàì fài fài. (It, i.e., the stain,
               has washed out completely).
19. fàs           O bàni fàs (He knows all about it)
20. fììììì       O gbègìi fììì (He’s very fat)
21. gànì gànìì    Li mi gànì gànì (It has rained a little)
22. gèlì gèlìì    Soje sèdi gànì gànì (The soldier has stood
               absolutely rigid)
23. gànì gànìì
24. jàaaa         Astonishment
25. jà jà jà jà jà (no no no no no)
26. jegì jegì     (very much – with the verb 'tremble')
27. jò /juò       (surprise – unpleasant)
28. kàbì kàbìì    a de kàbì kàbì (They, i.e., atila (the books)
               are exactly alike).
29. kàlà kàlà     Bi wùlì mìtambìmà kàlà kàlà. (They have dumped
               the sand in heaps).
30. kàlàm kàlàm   O boànì kàlàm kàlàm (She is very black)
31. ìpàdà        O mandì ìpàdà (He is perspiring very much)
32. ìpà ìpàìì    Osànù sè ìpà ìpà (The path is very straight).
33. kùbilìgàp kùbilìgàp O nàli kùbilìgàp kùbilìgàp (He is swallowing
               misily)
34. jììììì       N núa gu jìììì (I can barely see it, i.e.,
               okókòngù, the thorn)
35. pàdàp         O pùa pàdàp (He hit it wham)
36. pài pài      Waano pài pài (Tell him plainly)
37. **paligida paligida** 0 tua paligida paligida (The horse is making a noise like p...p...)
38. **pampani** 0 cuaa sua ke n da tieni pampani (He came and found that I had just done it).
39. **pampani** Mubini pampani (Hold it very firmly)
40. **pepe** Waano pepe (Tell him plainly)
41. **puo puo** Bikuli de puo puo. (They are exactly the same size)
42. **saiŋ** Libabuuli ya buaa ja li yen kubi saiŋ
   (When a limb has been 'asleep'), when the numbness is about to leave it, it keeps tingling. The range of meaning of kubi saiŋ here is not yet known.
43. **sodode** Li moani sodododo (It's very red)
44. **tia** Li gbie tia (It's very full)
45. **tontoni** Gedì tontoni (Go quickly)
46. **ya ya** A kubi ya ya (You're all wrought up). This second idiom with kubi, kubi ya ya, is not understood either).
47. **yegi yegi** Li moani yegi yegi (It's very red)

The following ideophones may form a sub-set. They occur with tie,
(to be, the copula), its inchoative tua,
(to become), or with ye (to be, the locative).
48. **fila/fida** 0 tie fida (He, i.e., the baby, is fat)
49. **gbaaa** Dinla tie gbaaa (It's misty today)
   Also used of the eyes.
50. **jájá** 0 tie jaja (He stands very straight)
51. **joaga joaga** Osaabu tie joaga joaga (The mush is in pieces, i.e., rather than in whole cakes).
52. kala oyama tie kala (He is anxious)
53. kalamm Li tie kalamm (It is very still)
54. kuna kuna Likani tie kuna kuna (It's hilly there)
55. palip Npinli ye palip (My tooth keeps having twinges of pain)
56. piii Okabo tie piii (The plane is barely visible)
57. pala Dinla n tua pala (Let today be the last)
58. sinsinâ Li tie sinsina (It's upside down, backside fore, inside out)
59. wàddà wàddà O tie wada wada (It is multi-colored)
60. \{yëngë yëngë\} minima tie nua yeni yeni (The water is very clear)
61. \{yënlë yënlë\}
62. yëngam O cuoni yëngam (He is walking with a swagger)

The following characteristics are noteworthy:

a) phonetic

The consonants /p/ and /s/ occur final in some ideophones whereas in other words they occur initial and medial only. The consonant /p/ occurs finally six times, the consonant /s/ twice. While the consonant /m/ occurs final in other words, /mm/ occurs finally in ideophones only, three times in the list just given.

The stressed vowel /a/ occurs as [ə] in ideophones only, in contrast to other words in the language where unstressed vowel /a/ occurs as [æ].

The vowel order in diphthongs in ideophones may be from low vowel to higher vowel, e.g., cain, whereas in other, normal words the order
is always higher vowel to lower vowel.

b) morphophonemic

Reduplication for emphasis is common as it is in other words. But whereas in verbs it is facultative and the unreduplicated form is the main member, in many ideophones there is no unreduplicated form, e.g., pai pai (very, used with be white/clear) never reduces to pai. The ideophones cited consist of from one to four syllables; apparently each ideophone is a unit which cannot be segmented.

No ideophones cited occur with gender affixes as do nouns, (see above pg. 53).

No ideophones cited occur preceded by a possessive adjective (see above page 53).

Only one ideophone cited, cu, occurs in the subject theme in an SVO sequence, (see above no. 15, iii). This position (one of three in which this ideophone occurs) would ordinarily be filled by a possessive nominal. Compare:

cu cu yogunu pia mikoma (hard rain's time has hunger)
obado biga pia mikoma (the chief's child has hunger)

where cu cu : obado :: yogunu : biga. However this sentence may be a proverb; compare "many a mickle makes a muckle"; it may not reflect ordinary morphology.

Many polysyllabic ideophones end in /i/, and many monosyllabic ideophones end in a vowel, as do verbs, see above, page 87. But only one ideophone, cu, see above 15, iv, can presumably occur immediately after a time marker, which is a criterion for recognizing verbs.
Syntax

Except for cu, all ideophones listed follow immediately after the verb.

In every example the verb used with an ideophone is positive.
In every example the verb used with an ideophone is declarative.
Some ideophones occur with transitive verbs, some with the copula or stative verbs, but this distinction arises because of the observer's English-speaking background and may not be valid for Gurma. No research has been done to discover whether any given ideophone may be used with both transitive and stative verbs, or in fact whether any given ideophone may be used with any other verb than that cited above. However in no 1 cited above the same ideophone is used with different verbs, and piii, nos. 33, 55, is cited with a transitive verb and also with the copula.

Semantic

In all cases but three, no. 21 gani gani, no. 34 piii and no. 49. gbaba, the ideophones are intensifiers in a positive direction; with these three ideophones the direction is negative.

There are some cognates, e.g.,

bagi bagi, used with two speaking verbs; compare bagi (to question), baagi (to console)
beli beli, used with stand upright; compare obeligu, the sucker, the slender, tall shoot from a root.
dindini, carefully; compare dindi (be soft) and French doucement pampani, recently; compare -pan- (new, young)
No research has been done to determine the percentage of borrowings among ideophones.
APPENDIX 2

The earliest linguistic mention of a language of the Gurma sub-groups may be that of G. C. A. Oldendorp, a German Baptist missionary in the West Indies, in 1774: "Numerals, thirteen nouns, and one sentence (a translation of 'Christ has loved us and washed away our sins with His blood') in each of twenty-four languages was collected from slaves." Professor Hair considers that one of these vocabularies, listed by Oldendorp as Kassenti, may be in the Kasele language. The Kasele, who number about twenty thousand, live in northern Togo just south of the Gurma area in Upper Volta. Westermann mentions Kasele as a member of the Gurma dialect cluster. The closeness of its relation to Gurma may be best judged by comparing with today's Gurma the words Oldendorp collected two hundred years ago from a slave in the West Indies two thousand miles away from home.


3Ibid., p. 214.

<table>
<thead>
<tr>
<th>Kassenti</th>
<th>Gurma (Fada)</th>
<th>Gurma (northern(^1))</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>obaa</td>
<td>yendo</td>
<td>yendo</td>
<td>one</td>
</tr>
<tr>
<td>illee</td>
<td>bilie</td>
<td>nlee</td>
<td>two</td>
</tr>
<tr>
<td>ittaa</td>
<td>bitaa</td>
<td>ntaa</td>
<td>three</td>
</tr>
<tr>
<td>inna</td>
<td>bina</td>
<td>nna</td>
<td>four</td>
</tr>
<tr>
<td>immu</td>
<td>bimuu</td>
<td>mmuu</td>
<td>five</td>
</tr>
<tr>
<td>illoop</td>
<td>biluoba</td>
<td>nluoba</td>
<td>six</td>
</tr>
<tr>
<td>illelee</td>
<td>bilele</td>
<td>nlelee</td>
<td>seven</td>
</tr>
<tr>
<td>imeen</td>
<td>binii</td>
<td>nnii</td>
<td>eight</td>
</tr>
<tr>
<td>uwah</td>
<td>biyia</td>
<td>nwia</td>
<td>nine</td>
</tr>
<tr>
<td>piek</td>
<td>piiga</td>
<td>piiga</td>
<td>ten</td>
</tr>
<tr>
<td>piekninobaa</td>
<td>piigin yendo</td>
<td>piigin yendo</td>
<td>eleven</td>
</tr>
<tr>
<td>piekninilee</td>
<td>piigin bilie</td>
<td>piiga lee</td>
<td>twelve</td>
</tr>
<tr>
<td>pilee</td>
<td>piilie</td>
<td>piilee</td>
<td>twenty</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>thirty</td>
</tr>
<tr>
<td></td>
<td></td>
<td>not recorded for Kassenti</td>
<td>one hundred</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>one thousand</td>
</tr>
</tbody>
</table>

**The thirteen nouns**

<table>
<thead>
<tr>
<th>Uweentjauwi</th>
<th>Otienu</th>
<th>Oyeenu</th>
<th>God</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ktak</td>
<td>tampoli</td>
<td>tampoli</td>
<td>heaven</td>
</tr>
<tr>
<td></td>
<td>(gita·ga)</td>
<td>(ki-)ta·ga</td>
<td>(the) rain</td>
</tr>
<tr>
<td>Uwin</td>
<td>oyienu</td>
<td>oyeenu</td>
<td>sun</td>
</tr>
</tbody>
</table>

\(^1\)See Chantoux, Gontier and Prost in *Grammaire gourmantché*, pg. 61.

give Kantcheri dialect as: 1 n le, 2 nle (sic), 3 nta, 4 nna, 5 nmu, 6 nluoba, 7 n lele (sic), 8 nni, 9 n-ya (sic), 10 ka piga (sic), 20 ka pi lie (sic).
When comparing the word lists one should take into account Old-endorp's maternal tongue - German - and notice that what he heard for the final consonants of illoop (six) and piek (ten) may well have been /-b/ and /-g/ even though he wrote '-p' and '-k'. One must also take into account that Gurma has three dialects (see Introduction).

Of Oldendorp's Kassenti (or Kasele) numbers, only obaa (one) is very different from any of the Gurma renderings. He heard an initial 'i-' followed by a geminate consonant where northern now tends to use only prefixed 'n-' and Fada prefixed 'bi-' (for counting). He recorded lengthened vowels much as Gurma has them today. His final '-p' in illoop (six) may have been /-b/. Of his nouns only Ktak (heaven) seems entirely unrelated to Gurma. Taking into account the 'ki - ga' class
of the eastern dialect which would be closest geographically to Kasele and Oldendorp's mother tongue, it would seem that he may have been given the word for 'rain', Fada gitaaga, eastern ketaaga, or else that the Gurma word for 'rain' approximates the Kasele word for 'heaven'. It would seem possible too that the word for 'his son', Gurma obijua, may have been given instead of 'father'. The only lengthened vowel recorded in the nouns is in Onaa, (mother), whereas one would have looked for some indication of /-a/- in Ktak and Ungmar resembling, as they do the the Gurma words gitaaga (rain) and oŋmaalo (moon). But the lengthened vowels in the numbers, both medial, illoop (six), piek (ten), and final illee (two), ittaa (three), uwah (nine) correspond to Gurma lengthened or on-glide vowels: nluoba (six), piiga (ten), nlee (two), nwia (nine).

Oldendorp's verse, "In der Sprache der Kassenti:

Christus tjau wigeem, ka undum mitjam duppan: Christus hat uns geliebet, und gewaschen mit Blut von Schuld."

might be translated in Gurma:

Christus den bua ti gi nuudi tipana len osoama. Oldendorp's first three words: Christus tjau wigeem must be considered with his word glossed God. Comparing these with modern Gurma:

Uweentjauwi

Christus tjau wi geem

Christus bua ti (Christ has loved us)

it would seem that tjau → bua, (has loved) and that wi → ti (us)

So Oldendorp's word for God is really three words:

Uween tjau wi,

in modern Gurma, Uween → Otienu (God), tjau → bua (has loved)
wi → ti (us). The modern connective between concurrent verbs is gi, compare Oldendorp's gee. It is suggested that the word division is faulty here and that \(-m + ka + undu\) → nuudi (washed), and that the following \(-m\) → len (with unstressed), mitjam → misoama (blood), duppan → tipana (our debts). So the comparison is as follows:

Oldendorp Christus tjau wi gee mkaundu m mitjam duppan
Modern Kilisiti bua ti gi nuudi len misoama tipana
Gloss Christ has us and washed with blood our debts.

The correspondence between Gurma and Kasele is very apparent.

The next known collections of vocabularies do not have a list recognized as being Gurma or Gurma related. These are:

T. E. Bowdich, *Mission from Cape Coast to Ashantee* . . ., London, 1819. Numerals in each of thirty-two languages, mainly of Gold Coast and hinterland: additional brief vocabularies in five of these . . . Extensively identified by Christaller and Delafosse.

H. Kilham, *Specimens of African languages spoken in the Colony of Sierra Leone*, London, 1828. Numerals and about sixty terms in each of thirty languages, in the first work devoted solely to African vocabularies. Partly identified by Latham, c. 1850, most of the remainder identified by Delafosse.

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1 Hair, "Collections. . . .", pp. 211 - 212.

2 Italics mine.
J. Clarke, *Specimens of dialects . . . in Africa*, Berwick-on-Tweed/London, 1848-49. . . Numerals and/or ten nouns in each of about 250 dialects and languages . . . A fair number have been identified by Latham, Christaller, Delafosse, Struck and Westermann. Clarke's Gurma specimen, recently identified in a new edition, edited by E. Ardener (Gregg, 1972) is as follows:

<table>
<thead>
<tr>
<th>Clarke</th>
<th>Koelle</th>
<th>Fada</th>
<th>northern</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>mikel</td>
<td>òdso</td>
<td>oja</td>
<td>ojua</td>
<td>the man</td>
</tr>
<tr>
<td>alamis</td>
<td>wòpùa</td>
<td>opua</td>
<td>opua</td>
<td>the woman</td>
</tr>
<tr>
<td>nuba</td>
<td>ìba</td>
<td>mba</td>
<td>mba</td>
<td>my father</td>
</tr>
<tr>
<td>minna</td>
<td>min na</td>
<td>min na</td>
<td>my own mother</td>
<td></td>
</tr>
<tr>
<td></td>
<td>na (n̩na) -na (n̩na) -na (n̩na)</td>
<td>mother (my own mother)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>nima</td>
<td>nyíma</td>
<td>njíma</td>
<td>njíma</td>
<td>water</td>
</tr>
<tr>
<td>oyenu</td>
<td>oyénu</td>
<td>oyíenu</td>
<td>oyeenu</td>
<td>the sun</td>
</tr>
<tr>
<td>omun</td>
<td>ugmáro</td>
<td>ogma'lo</td>
<td>ogma'lo</td>
<td>the moon</td>
</tr>
<tr>
<td>kokoro</td>
<td>kókuro</td>
<td>kokolo</td>
<td>kokolo</td>
<td>fowl</td>
</tr>
</tbody>
</table>

The first extensive linguistic record of Gurma is that of Sigismund Wilhelm Koelle in his justly famed *Polyglotta Africana* (London, Church Missionary House, 1854). This German-born missionary, trained first at the Basel Missionary Seminary, then at the Church Missionary Society College in Islington, went to Africa as a member of the Church Missionary Society in 1847. At this time the Society was encouraging its missionaries

To study African Languages, first as a practical means of bringing Protestant Christianity to the attention of
Africans, not least through Bible translation, and secondly in order that the production of grammars and literature might demonstrate the essential humanity of Africa's tongues, and hence people, and thus serve as a final argument in the humanitarian campaign against the African Slave Trade.  

Koelle's *Polyglotta Africana* is, in the words of his own extended title, "A comparative vocabulary of nearly three hundred words and phrases in more than one hundred distinct African languages." One of these languages is Gurma.

In his Introduction to the reprint of Koelle's work Professor Hair says,

With each vocabulary Koelle supplied a note on the informant and his life-history, and on the topography of the district in which the language was spoken. Considering the vague knowledge of interior Africa at this date, the Polyglotta's geographical information was remarkably exact and at times in advance of previous knowledge. On the purely

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Koelle's work was vastly better than that of his predecessors: first, in that his selection of forms was based on some grammatical understanding of African languages, (for instance he distinguished prefixes and added plural forms), and secondly in that his orthography was consistent, reasonably subtle, and based on a standard model.¹

Koelle's informant for the Gurma vocabulary, as he tells us himself in the *Polyglotta Africana*, was Adsima or John Wilhelm, born in Bungu and brought up at Datanu, another Gurma town, where he lived till about his twenty-fourth year. Three years after his being kidnapped, he was sold to the Spaniards in Asante. He has been in Sierra Leone six years, with four countrymen, who however are old, and have forgotten much of their native language.

¹"Alphabet de linguistique universelle", published in Berlin in 1855 by the noted Egyptologist C. R. Lepsius who was "induced to direct his special attention to the subject by a visit from Rev. S. W. Koelle." In 1863 Lepsius published *Alphabet destiné à reduire les diverses langues à une orthographe uniforme en caractères européens* (Londres et Berlin, 1863). Lepsius' alphabet had two hundred forty characters so was clumsy, but it anticipated the I.P.A. by about thirty years.
Adsima (Fada dialect, Ajima) is a name commonly given by Gurmas today to a child, male or female, born on Friday. It is of Arabic origin, perhaps through Hausa; compare the Hausa word for Friday, Adjimma'a. The Reverend A. Prost has suggested that the town named Datanu where Adsima grew up may be the present northern Togo town Dapango, and that the birthplace Bungu refers not to a town but to a region in south eastern Gurma territory just north of the Togo border. In this case Adsima would be an eastern dialect speaker.

Koelle's consistent use of [h] in initial position where Fada dialect would have /ŋ/ could tend to confirm this; it may however, suggest a northern dialect speaker. Koelle has one verb ṣbási, hear (compare Fada and eastern dialects, ṣbádi) whose -si ending definitely suggests the northern dialect. Several other things too nebulous to present without further investigation suggest this also. Alternatively however, any of these features could be the result of influence from the languages immediately to the south of the Gurma area, Migangam, Moba, Kusal or Berba. A comparative study of Gurma dialects and these neighbouring Gur languages could well serve to establish the dialect of Koelle's Gurma speaker.

Koelle's vocabulary illustrates all the Fada Gurma dialect consonant phonemes and their variants (excluding two border phonemes)

except that he does not show voiceless-voiced contrast between /k\p{}/ and \( ^{=/g^b} /, or, generally, between /c/ and /\f\/. He naturally did not use a modern phonemic method. He uses the symbol ' ' to indicate length, and the symbol ' ' ' to indicate accent. The following examples from his vocabulary have been grouped according to our present understanding of the phonemes and their variants:

<table>
<thead>
<tr>
<th>phoneme Koelle</th>
<th>Koelle's Gurma</th>
<th>Fada Gurma</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/p/ p stressed syllable initial, hereafter SSI</td>
<td>pí\˘emu</td>
<td>π\˘emu</td>
<td>arrow</td>
</tr>
<tr>
<td>/b/ b SSI and medial after [-m-]</td>
<td>bi\˘ana</td>
<td>bj\ana</td>
<td>armlets</td>
</tr>
<tr>
<td></td>
<td>yômbo</td>
<td>yombo</td>
<td>slave</td>
</tr>
<tr>
<td>w unstressed syllable initial, nyawo hereafter US I (intervocalic)</td>
<td>yombo</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>vy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>t SSI</td>
<td>tamu</td>
<td>ta\˘mo</td>
</tr>
<tr>
<td></td>
<td>d SSI</td>
<td>da</td>
<td>da</td>
</tr>
<tr>
<td></td>
<td>t US I</td>
<td>titi</td>
<td>ti\˘di</td>
</tr>
<tr>
<td>/c/ k once before a several times before [-i-]</td>
<td>kakati</td>
<td>caca\˘di</td>
<td>shoe</td>
</tr>
<tr>
<td></td>
<td>ōkiro</td>
<td>oci\o</td>
<td>moon</td>
</tr>
<tr>
<td></td>
<td>k’inti</td>
<td>ci\’ndi</td>
<td>sneeze</td>
</tr>
<tr>
<td></td>
<td>k\˘ewu</td>
<td>c\˘ebu</td>
<td>soap</td>
</tr>
<tr>
<td>d\˘ several times</td>
<td>bó\˘d\˘awili</td>
<td>b\˘qacabili</td>
<td>shoulder</td>
</tr>
</tbody>
</table>

1 Tone is not marked to avoid confusion with Koelle's orthography; stress is not marked as it falls on the base and can be predicted.

2 Koelle refers to Hebrew characters in his preface. Could it be that here he is thinking of [-w-] as [-v-], and using it as intervocalic[-b-] (compare [\˘a] and [\˘u])?

3 In Fada dialect these are plural forms, trees, shoes.
<table>
<thead>
<tr>
<th>phoneme</th>
<th>Koelle</th>
<th>Koelle's Gurma</th>
<th>Fada Gurma</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ŋ/</td>
<td>ds SSI; used often</td>
<td>dsandsán ’u</td>
<td>joŋjɔŋgu</td>
<td>bat</td>
</tr>
<tr>
<td>g SSI; used twice</td>
<td>géndi</td>
<td>jenli</td>
<td>egg</td>
<td></td>
</tr>
<tr>
<td>before [-e-], [-i-]</td>
<td>ginu</td>
<td>ji’nu</td>
<td>vein</td>
<td></td>
</tr>
<tr>
<td>/g/</td>
<td>g SSI and USI</td>
<td>gále</td>
<td>ga’li</td>
<td>thread</td>
</tr>
<tr>
<td>r¹ USI.</td>
<td>suán’g u’</td>
<td>saŋgu</td>
<td>mat</td>
<td></td>
</tr>
<tr>
<td>/k/</td>
<td>k SSI before [-a-], [-o-], [-u-]</td>
<td>kare</td>
<td>kali</td>
<td>sit</td>
</tr>
<tr>
<td>/gb/</td>
<td>gb² SSI</td>
<td>gbána</td>
<td>gbá’ni</td>
<td>kneel</td>
</tr>
<tr>
<td>/kp/</td>
<td>kp²</td>
<td>gbána</td>
<td>kpá’na</td>
<td>spears</td>
</tr>
<tr>
<td>/gəm/</td>
<td>gm³ SSI (once only)</td>
<td>ugmáro</td>
<td>oŋma’lo</td>
<td>moon</td>
</tr>
<tr>
<td>n’m SSI (once only)</td>
<td>a’ńmitsa</td>
<td>aŋmi’da</td>
<td>kuskus (sic)</td>
<td></td>
</tr>
</tbody>
</table>

1Koelle states that his [ŋ] is equivalent to ɛ (I.P.A. [ŋ] or [ŋ]) in Arabic, that is, a voiced velar or uvular fricative. For many Fada and northern speakers this phonemic variant of /g/ is implosive, [-g-], but it occurs in complementary distribution of [g-] and this is the way Koelle uses it.

2Koelle has not recorded the voiceless-voiced contrast here. He recorded gbé-nyo’ ewe, and gbétoŋni ram, which in all current Gurma dialects have initial /p/ pengali ewe, petonli ram; did Koelle think he heard [kp-] (in Gurma double stops the second is always stronger than the first so [kp-] may easily be heard by an outsider as [p-]) even though he recorded it as [gb-]?

3Prost, Chantoux and Gontier still use [gm] for /gəm/ in their new Gurma grammar (1968) though they now use /ŋ/ where they used [ŋg].
<table>
<thead>
<tr>
<th>phoneme</th>
<th>Koelle</th>
<th>Koelle's Gurma</th>
<th>Fada Gurma</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/m/</td>
<td>m SSI or medial</td>
<td>mī'are</td>
<td>mjali</td>
<td>nose</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pi'emu</td>
<td>piemu</td>
<td>arrow</td>
</tr>
<tr>
<td></td>
<td></td>
<td>yōmbo</td>
<td>yombo</td>
<td>slave</td>
</tr>
<tr>
<td>/n/</td>
<td>n SSI or medial</td>
<td>na'hāma</td>
<td>na'gama 'a</td>
<td>milk</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dšāno</td>
<td>ca'no</td>
<td>stranger</td>
</tr>
<tr>
<td></td>
<td></td>
<td>n'antsi</td>
<td>nandi</td>
<td>animal (meat)</td>
</tr>
<tr>
<td>/ŋ/</td>
<td>ny SSI</td>
<td>ny'awo</td>
<td>jabo/Joabo</td>
<td>alligator</td>
</tr>
<tr>
<td>/ŋ/</td>
<td>n' SSI and syllable final, sometimes followed by -g-</td>
<td>n'ān</td>
<td>ga'n(-i)</td>
<td>cook</td>
</tr>
<tr>
<td></td>
<td></td>
<td>lēn'ga</td>
<td>leqga</td>
<td>bed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>lōn'a</td>
<td>logga</td>
<td>drum</td>
</tr>
<tr>
<td>/h/</td>
<td>h SSI (eastern sometimes) and northern (always) use simple aspiration where Fada uses /ŋ/.</td>
<td>hu'awo</td>
<td>ṭuabo</td>
<td>goat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hn'ani</td>
<td>ṭani</td>
<td>good</td>
</tr>
<tr>
<td>/l/</td>
<td>1 SSI, occasionally USI</td>
<td>la</td>
<td>la</td>
<td>see</td>
</tr>
<tr>
<td></td>
<td></td>
<td>yāli</td>
<td>yali</td>
<td>axe</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mi'ari</td>
<td>mi'ali</td>
<td>nose</td>
</tr>
<tr>
<td></td>
<td></td>
<td>yāři</td>
<td>yari</td>
<td>axes</td>
</tr>
<tr>
<td>/f/</td>
<td>f generally used for USI</td>
<td>fō</td>
<td>fuo</td>
<td>breathe</td>
</tr>
<tr>
<td>/s/</td>
<td>s</td>
<td>This opposition is not now recognized in Fada or northern. Prost does not mention it in eastern.</td>
<td>sāñe</td>
<td>sani</td>
</tr>
<tr>
<td>/w/</td>
<td>w SSI</td>
<td>ṣašātì</td>
<td>sasa'di</td>
<td>itch</td>
</tr>
<tr>
<td>/y/</td>
<td>y SSI</td>
<td>yāma</td>
<td>ya'ma</td>
<td>salt</td>
</tr>
</tbody>
</table>

Koelle's preface lists nine vowels, their usage illustrated by English words. He uses seven of these in the Gurma vocabulary:
a, e, e, i, o, o, u. The symbol [ə] is used several times as a back variant of [a] when labialization has not been indicated, e.g., bórgu (/bɔːŋgu/) arm, nyóromo (/ɲɔːɡima/) earring. Whenever Koelle shows labialization he apparently feels this sufficiently indicates the quality of [-a-] and so does not use his symbol 'o', e.g., núaŋ'gu (/nWAYŋu/) bird. He seems to have heard [e] and [i] in free variation in word-initial and word-final position; compare odúalo, edúali pig(s), with olúomo, ilúemi elephant(s), where one would expect the noun class affixes to be 'o - o, i - i' in both cases, and gbáwíle (/kpaبلاد/) bone, with gbárále (/kpaبلاد/) bench, where one would expect the suffix to be [-li] in each case.

Koelle shows vowel length on almost all vowels recognized in current Fada dialect as long:

<table>
<thead>
<tr>
<th>Koelle</th>
<th>Fada</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>támù</td>
<td>taímo</td>
<td>horse</td>
</tr>
<tr>
<td>bìlí</td>
<td>biţi</td>
<td>breast</td>
</tr>
<tr>
<td>múri</td>
<td>muţi</td>
<td>rice</td>
</tr>
</tbody>
</table>

However many vowels marked as long are not long, e.g., kébíra (/gibığa/) boy, also recorded as bíra, boy, and mbíra, ibíra, son. In this case the vowel segment of the base, [-i-] is incorrectly marked long in one instance and correctly left short in four. A possible explanation of this is that Koelle's Gurma speaker syllabified the elicited Gurma words and in so doing gave a false impression of length on some short segments.

Where a vowel in Fada dialect has an on-glide, Koelle generally writes it in this way:
Koelle  Fada  meaning
piemu  pijemu  arrow
bia  bja  bad

He distinguishes between two degrees of labialization:
boano  bgani  black
bu'a  bwa  love

but not always as done today in Fada dialect:
soan'e  soangi  wet
su'an'gu  soangu  mate

If Koelle does not record an on-glide he often marks the vowel for
length:
yiga  yiega  calabash
lọwa  lọoba  six

Similarly, where today in Fada Dialect [-V+N+C-] occurs, Koelle
may have recorded it in this way, e.g.,
gendi  jenli  egg

or he may have marked the vowel for length and omitted C,
bënî  benli  chest
gbâni  kpa'ali  spear

Koelle has generally marked stress on the base of the Gurma words
where it falls today, but sometimes elsewhere, e.g., dșura (/juga/) knife,
with stress marked on '-u-' in the base, is also recorded kedsura
(/gijuga/) and stress is marked on '-é-' in the prefix while the base
segment '-ū-' is marked for length.¹ This too may be because of the
way the Gurma speaker syllabified.

¹There are a number of such cases; in all such Koelle's length sign '-'
really indicates primary stress while his "accent", '/' indicates
secondary stress.
Koelle's vocabulary shows most of the noun class affixes recognized today; some examples follow:

<table>
<thead>
<tr>
<th>Koelle</th>
<th>Fada</th>
</tr>
</thead>
<tbody>
<tr>
<td>singular plural</td>
<td>meaning</td>
</tr>
<tr>
<td>o - o</td>
<td>singular plural</td>
</tr>
<tr>
<td>bi - ba</td>
<td>o - o</td>
</tr>
<tr>
<td>obádo</td>
<td>biadiba</td>
</tr>
<tr>
<td>bisáreba</td>
<td>white people</td>
</tr>
<tr>
<td>o - o/u</td>
<td>o - o</td>
</tr>
<tr>
<td>e/i - i</td>
<td>i - i</td>
</tr>
<tr>
<td>idṣúmo</td>
<td>mosquito</td>
</tr>
<tr>
<td>edṣúmi</td>
<td>oṣumo</td>
</tr>
<tr>
<td>otámu</td>
<td>horse</td>
</tr>
<tr>
<td>itámi</td>
<td>ota'mo</td>
</tr>
<tr>
<td>tílu</td>
<td>etíli</td>
</tr>
<tr>
<td>etíli</td>
<td>otilu</td>
</tr>
<tr>
<td>- u</td>
<td>o - bu</td>
</tr>
<tr>
<td>- ti</td>
<td>i - di</td>
</tr>
<tr>
<td>gbémi</td>
<td>cotton tree</td>
</tr>
<tr>
<td>títi</td>
<td>(sic)</td>
</tr>
<tr>
<td>- ru</td>
<td>o - gu</td>
</tr>
<tr>
<td>te - te</td>
<td>ti - di</td>
</tr>
<tr>
<td>bóru</td>
<td>arm</td>
</tr>
<tr>
<td>tedáte</td>
<td>wood</td>
</tr>
<tr>
<td>-V+</td>
<td>-Vli/re</td>
</tr>
<tr>
<td>-Vli/re</td>
<td>- ra</td>
</tr>
<tr>
<td>yáli</td>
<td>axe</td>
</tr>
<tr>
<td>yára</td>
<td>liyali</td>
</tr>
<tr>
<td>dépöre</td>
<td>rat</td>
</tr>
<tr>
<td>dépöra</td>
<td>lidapoli</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

1 The meaning tree Koelle gave it, the form is plural and his singular might have been tiwu.
2 The singular of this noun means 'a piece of wood', the plural form is collective, 'wood', i.e., many pieces of wood.
<table>
<thead>
<tr>
<th>Koelle</th>
<th>Fada</th>
</tr>
</thead>
<tbody>
<tr>
<td>singular</td>
<td>singular</td>
</tr>
<tr>
<td>plural</td>
<td>plural</td>
</tr>
<tr>
<td>meaning</td>
<td>meaning</td>
</tr>
<tr>
<td>(--V^+)re/le</td>
<td>li -V^+li</td>
</tr>
<tr>
<td>a -V^+na</td>
<td>a -V^+na</td>
</tr>
<tr>
<td>dalle</td>
<td>lita'li</td>
</tr>
<tr>
<td>at'ana</td>
<td>at'a'na</td>
</tr>
<tr>
<td>bTa're</td>
<td>libiali</td>
</tr>
<tr>
<td>bTa'na</td>
<td>abiana</td>
</tr>
<tr>
<td>ke - ra -mu</td>
<td>gi - ga</td>
</tr>
<tr>
<td>këbëra</td>
<td>mubimu/abila</td>
</tr>
<tr>
<td>child</td>
<td>gibiga</td>
</tr>
<tr>
<td>dûsîra</td>
<td>gijusiega</td>
</tr>
<tr>
<td>dusiemu</td>
<td>mujusiemu</td>
</tr>
<tr>
<td>me - ma</td>
<td>mi - ma</td>
</tr>
<tr>
<td>mefama</td>
<td>mifama</td>
</tr>
<tr>
<td>tomorrow</td>
<td>mina'nam'ëë</td>
</tr>
<tr>
<td>nahama</td>
<td>milk</td>
</tr>
</tbody>
</table>

According to Hair, Koelle's arrangement of languages was specifically designed to show affinities, and the language groups Koelle designated were both an advance on previous classification and the basis of further studies during the next century.²

Koelle grouped Gurma with languages he calls Mose, Dselana, Guresa, Legba, Kaure, Kiamba, Kouama, Bagbalan, Kasm and Yula. (Section IV A, B, C, D in the vocabulary lists). Bendor-Samuel describes these as "some twelve languages and dialects of the Gur group . . . identifiable as Bargu, Buli

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1 One would have expected Koelle to record dûsîra here, compare 'knife' dûrà, mosquito dûmë, the only other occurrences of /ju-/ in Koelle.

Dompago, Gurma, Kabre, (2 dialects), Moore, Pilapila, Sisala (2 dialects) and Tem.  