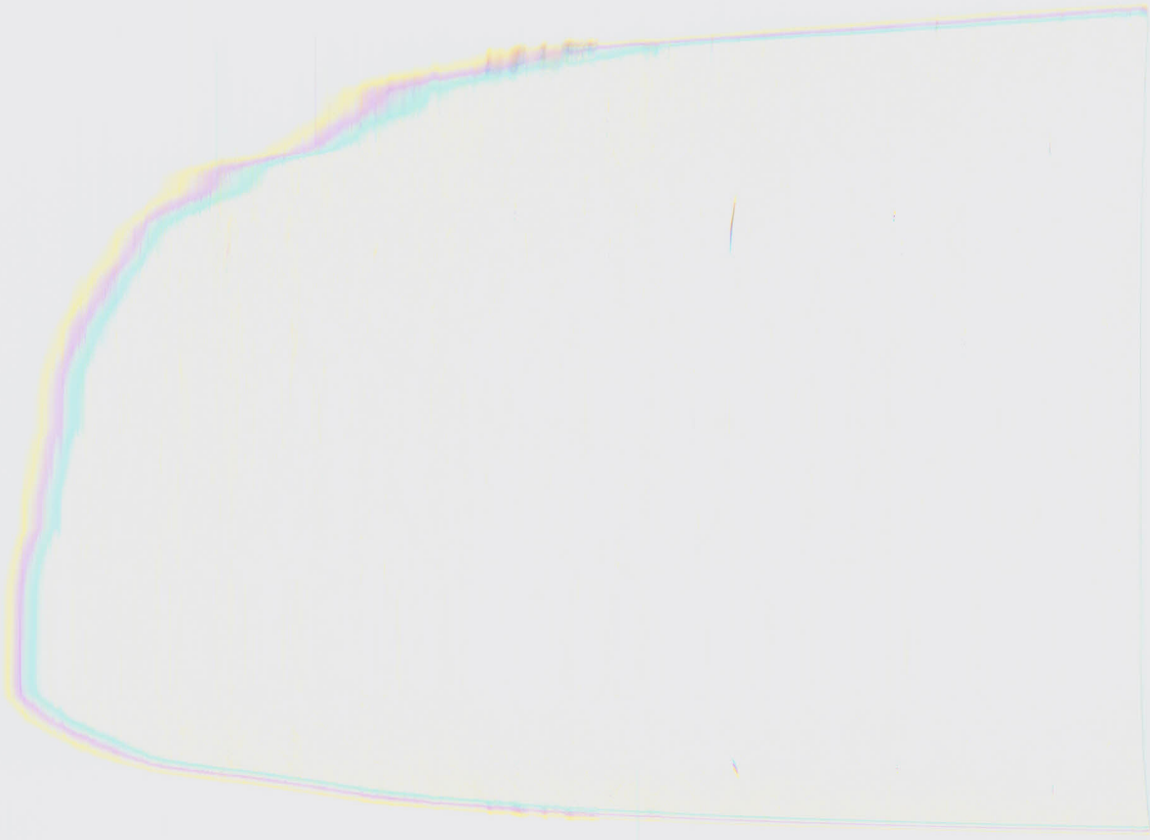

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

THE SOUND PATTERN OF KISTANINNA: A GENERATIVE APPROACH

by

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THE SOUND PATTERN OF KISTANINNA: A GENERATIVE APPROACH

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ABSTRACT

The thesis consists of three major sections: (i) phonemes and allophones, (ii) rules of phonetic realizations, and (iii) suprasegmentals

In the section dealing with the phonemes and allophones, the consonant and vowel phonemes are listed with their allophonic variants, giving examples of their distributions. In this section also dealing with sequences and clusters of consonant phonemes, co-occurrences of the consonants are classified in terms of their manner of articulations such as, stops, affricates, fricatives, nasals, liquids, glides, and their distributions in words, and in the next section, finally culminating with a summary of the syllable structure of the language.

In the rules of phonetic realizations, assimilatory and non-assimilatory processes as, palatalization, labialization, nasalization, homorganic nasal assimilation, consonant assimilation (length), vowel assimilation, intervocalic weakening, vowel reduction, vowel insertion and glide formation, are thoroughly discussed and analysed.

In the section dealing with suprasegmentals, consonant length is analysed; and the relationship between pitch and stress is also determined. The intonation patterns of the language are also examined.

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ABBREVIATIONS AND NOTATIONAL CONVENTIONS

C	=	Consonant
C^{W}	=	labialization
C^{y}	=	palatalization
C'	=	glottalization
$\underset{\frown}{C}$	=	dental
V	=	vowel
$\tilde{V}$	=	nasalization
F(fem)	=	feminine
M(masc)	=	masculine
P	=	person
/ /	=	to enclose phonemic representation
[ ]	=	to enclose phonetic representation
[ ]	=	to enclose distinctive features
{ }	=	to enclose alternative elements
( )	=	to enclose optional element
⟶	=	'is realized as'
Ø	=	null (zero) sign
#	=	word - boundry
α, β	=	variables ranging over + and - (features)
/	=	high pitch (stress)
\	=	low pitch
ˆ	=	falling pitch
ˇ	=	rising pitch

1. INTRODUCTION

1.1 STATEMENT AND SIGNIFICANCE OF THE PROBLEM

The main objective of the present study is to make a phonological analysis of kistaniňňa, one of the northern representatives of the Gurage languages.

Since no comprehensive phonological study of the language has been made, the thesis focuses on the sound patterns of the language.

Previously, studies of the language have been inadequate with a brief mention here and there in outline forms in such writings as F. Praetorious , J. Mayer s, L. Reinisch s, Marcel Cohen s and W. Leslau s.[1]

Furthermore, no collection of texts of the cultural backgrounds of the language existed until Leslau has made a very significant contribution in eliciting texts of the traditional values of the people.

Although it is known that Ethio-Semitic languages are better studied than the other families of Ethiopian languages, "Gurage is one of the least known semitic languages of Ethiopia".[2]

As regards the name of the language, Aymallal, Soddo, or kistaniňňa is used in different literatures. However, "speakers of this language call themselves kistane a chiristian and their language kistaniňňa, but do not object to calling

their language Soddo rather than Aymälläl.[3]

Thus, hereafter the term kistaniňňa is consistently used to refer to the language in question throughout the present study.

Several tribes of Gurage people live in a compact mountainous area of Shewa province, South of Addis Ababa.[4]

The kistane live, side by side with the Oromo people, and they inhabit the land that lies between the Lemman - awash river line in the north, the Maqi river in the south.[5]

Today, quite a significant population of kistane has settled in the capital, Addis Ababa, and it is one of the better organized ethic groups in the city.[6]

Consequently, most of these people are now bilinguals, using Amharic consistently side by side with their own language in their everyday business. This situation has resulted in a great deal of influence of Amharic on kistaniňňa.

1.2 PROCEDURE

In the elicitation of the data, Leslau's Ethiopians Speak: Studies in Cultural Backgrounds. III. Soddo, is used as one of the sources; since it is quite unnecessary to duplicate the efforts of the authority in collecting the data.

Thus, words and phrases have been taken with their translations from his texts. In addition, Leslau s material has been supplemented by the Swadesh 200 word - list, and recorded on tape, and then played back for phonetic transcription.

The paper consists of three major sections:

i) the phonemes and allophones.
ii) the rules of phonetic realizations and,
iii) the suprasegmentals.

In the section dealing with the phonemes and allophones, the consonant and vowel phonemes are listed with their allophonic variants, giving examples of their distributions.

In this section also dealing with sequences and clusters of the consonant phonemes, co-occurences of the consonants are classified in terms of their manners of articulation such as, stops, affricates, fricatives, nasals, liquids, glides, and their distributions in words, and in the next section, finally culminating with a summary of the syllable structure of the language.

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In the section dealing with suprasegmentals, consonant length is analysed; and the relationship between pitch and stress is also determined. The intonation patterns of the language are also examined.

1.3 REVIEW OF THE LITERATURE

1.3.1 Leslau s Ethiopians Speak: Studies in Cultural Backgrounds 111 Soddo, (University of California Press, 1968, 236 p.), consists of two major sections:

i) an outline of Soddo

ii) texts and translations

In the outline, Leslau devotes three pages (pp 6-8) to phonology in which he has a brief sketch of the phonological features of kistaniňňa such as, meeting of vowels, word initial and final vowels and consonants, general phonetic phenomena, prepalatalization, assimilation, supported by a chart of the 26 consonant phonemes, and a list of the 7 vowel phonemes

In the section dealing with morphology (pp 8-34), he has presented some of the form classes and morphological categories of the language such as, nouns, articles, gender, number, complement, pronoun, copula, verb, and particles accompanied with brief discussions and explanations of some of the form classes.

In the section, Texts and translations (pp. 37-215), he presents the major objective of his study in cultural backgrounds of Soddo, giving the texts in phonemic transcription under the titles: The country, the Galla in Soddo, the Clans of Soddo.., etc as narrated by the native, with morphemic translation in English between the texts as well as a free translation of the stories at the bottom of each text

In the phonology (p. 6) Leslau has included k^w, k'^w, g^w to the inventory of phonemes, but he has excluded m^w, f^w, although he has used them in his phonemic transcription.

But according to the present study, labialized consonants are considered allophonic variants of their respective phonemes, since they do not contrast, and there is a gap in their distribution occurring only in the environment of back vowels in underlying representation.

Leslau has also included the vowel / ɨ / as a phoneme, and yet doubts its final occurrence. But

in the present study, it is treated as non-phonemic since its occurrences are predictable It is used to break up two-term initial clusters and three term clusters in any other positions at the level of phonetic representations.

As we go through Leslau s texts, we also find inconsistencies in his phonemic transcription. He sometimes transcribes some such words as the following in two different ways: f^{W}ä lä or folä; g^{W}oy or goy; yähun or yehun; k^{Y}a or kiya . . etc This has also been commented upon by Hetzron in his review of Ethiopians Speak: Studies in Cultural Backgrounds III Soddo.[7]

Such inconsistencies are perhaps the result of his phonemicization

1 3 2 Goldenberg s "kistanińńa": Studies in a northern Gurage language of christians" (Reprinted from Orientalia Suecana Uppsala, 1969, v 17 (1968), p. 61-102) consists of eleven sections

In (i) The kistane and their language (pp. 61-66), the historical backgrounds of the people are introduced.

The phonological aspects of the language are also briefly discussed in (ii) vowel phonemes (pp 66-68), and (iii) stress, pitch and length (pp 68-69).

The remaining eight sections (pp 69-102) are devoted to morphological classifications followed by brief discussions

In the first section, Goldenberg introduces the historical background of the kistane people, giving a brief account of their constant war with the Oromo people over their territories

In his discussion of the vowel phonemes, he recognizes only six vowel phonemes /ä, a, e, i, o, u/ excluding vowel /ɨ/ as only "a manifestation of syllabic position of consonants in the absence of vowel".[8]

He also states that stress, pitch and length are interrelated.

As to the consonants, he has very little to say, except for the labialized and palatalized consonants which he transcribes as biphonematic throughout

In the rest of the work, he deals with the classification of form classes, making a brief description of the various grammatical categories and their general morphological features.

1.3.3 Hetzron s Gunnän-Gurage Languages (Napoli, Istituto Orientale di Napoli, 1977, 264 p.), consists of three major parts:

(1) A Survey

(2) A Concise Comparative Grammar of the Gunnän-Gurage languages

(3) A Gunnän-Gurage Reader

In the survey (pp. 1-24), he discusses the historical background of the languages classified as "Gunnän-Gurage". The languages involved are: Soddo, Goggot (both of the n-group) The rest is the tt-group which includes the western Gurage.[9]

He is responsible for coining the term "Gunnän-Gurage" (Hetzron, 1972 a, A 1) based on a lexical isogloss for the word meaning, head, which is /dum/ in East Gurage, while in the rest of the Gurage languages, it is /gunnän/, /gunär/, or /gunʔär/.[10]

The part which is pertinent to the present study is the section dealing with the Comparative grammar of the Gunnän-Gurage languages (pp. 31-52), particularly, his phonological and morphological analyses.

With regard to the vowels, Hetzron states that the vowel /ɨ/ is non-phonemic, but an epenthetic vowel with the function of disolving undesirable consonant clusters.[11]

In his statement of the labialized consonants, he says, "sequences of noncoronal consonants and labial vowels are phonemically equivalent to sequences of labialized noncoronal consonants and central vowels ... Thus, ko = $k^{w}ä$; ku = $k^{w}ɨ$ ...".[12]

Hetzron s interpretation of /ɨ/ as an epenthetic vowel, and the labialized noncoronal consonants, in Gunnän-Gurage also holds quite true for kistaninna as well. However, in his analyses of root - consonant alternations occuring in the Gunnän-Gurage languages, he excludes kistaniňňa from such occurrence which is quite untrue; since the language regularly shows consonant alternations of stops /b, k/ with their respective fricatives /β , h/ intervocalically.

1.3.4 Bezuwork s A Phonology of kistane Language. 1981, pp 31 (A Senior Essay in partial fulfillment of the requirements for the degree Bachelor of Arts) consists of the following topics:

i) Available literature on the kistane language (pp 4-7)
ii) Allophones of kistane (pp 8-19)
iii) The phonemes of kistane (pp 20-25)
iv) Morphophonemic and syllable structure (pp 26-30)

In the first section of her introduction she states that the scope of her study is limited to articulatory description of the sounds of the language.

In her review of Leslau s Ethiopians Speak: Studies in Cultural Backgrounds. III Soddo, she says she could get no evidence from the data she has

collected which supports, k^w, k^{w}, g^w, as phonemes; but she agrees with him in recognizing seven vowel phonemes including /ɨ /.

In the second section, she deals with allophonic variants of the phonemes, listing them with examples.

In the 'phonemes of kistane', she only gives examples of contrasting pairs of the phonemes with no further application of phonological rules.

In the section dealing with morphophonemic and syllable structure, she gives no adequate discussion and analysis of the topics in question, but only a few examples of the palatalization, and the CV patterns of the language

2. PHONOLOGICAL DESCRIPTION

2.1 PHONEMES AND ALLOPHONES

In kɨstaniññə there are twenty three consonant and six vowel phonemes.

The consonant phonemes are classified into six major categories determined by their mode of articulation such as, STOPS, AFFRICATES, FRICATIVES, NASALS, LIQUIDS and GLIDES.

The vowel phonemes are classified into: (i) FRONT, CENTRAL, BACK, according to the position of the tongue; (ii) HIGH, MID, LOW, according to the height of the tongue

According to Leslau's analysis, the language has twenty six consonant and seven vowel phonemes, thus, adding /k^{W}, k^{W}, g^{W}/ and /ɨ/.

However, in the present study labialized consonants are treated as allophonic variants of their respective phonemes since they do not contrast; there is a gap in their distribution occurring only in the environment of back vowels in the underlying representation.

The vowel /ɨ/ which is recognized as a phoneme by Leslau and Bezuwork, is taken as an epenthetic vowel in the present study, occurring at the level of phonetic representation to break up two-term initial clusters and three-term clusters in other positions, but occurring at the level of underlying representation.

2.1.1 CONSONANT PHONEMES

2.1.1.1 STOPS: /b, d, t, t', k, k', g/

Among the stops, /t' and k'/ are modified by pharynx air mechanism; therefore, they are referred to as, GLOTTALIZED STOPS.

PHONEMES:	ALLOPHONES & EXAMPLES
(1) /b/	[b] Voiced bilabial stop. It only occurs in initial position.
	/bäsär/ 'meat' [bäsär]
	[β] Voiced bilabial fricative. It occurs medially between vowels, and finally when preceded by a vowel
	/abar/ 'dry season' [aβar]
	/säb/ 'Person' [säβ]
(2) /d/	[d̪] Voiced dental stop. It occurs in all positions
	/dafa/ 'reason' [d̪afa]
	/wädak / 'to lough' [wod̪ak]
	/gälod/ 'knife' [gälod̪]
(3) /t/	[t̪] Voiceless dental stop. It occurs in all positions
	/tägan/ 'plantation' [t̪ägan]
	/metiyya"/ 'grand parent' [met̪iyyä]
	/wzat/ 'sweat' [wizat̪]

PHONEMES	ALLOPHONES & EXAMPLES
(4) /t'/	[t'] Voiceless dental glottalized stop It occurs in all positions
	/t'älot/ 'prayer' [t'ä́lot]
	/mt'ät'/ 'sickness' [mɨ́t'ät']
	/wärät'/ 'to cut' [worä́t']
(5) /k/	[k] Voiceless velar stop. It occurs in all positions.
	/kaččä/ 'after' [kaččä́]
	/skär/ 'local beer' [sɨkä́r]
	/ähäk/ 'so' [ä́häk]
	[k^w] Voiceless velar labialized stop It occurs in initial and medical positions preceding central vowels.
	/kuya/ twenty [k^wɨya]
	/kua/ he [k^wa]
(6) /k'/	[k'] Voiceless velar glottalized stop. It occurs in all positions
	/k'ärr/ 'horn [k'ärr]
	/wäk'ač/ black smith' [wók'ač']
	/balik'/ adult' [bálik']
	[k'^w] Voiceless velar labialized glottalized stop. It occurs in initial and medial position preceding central vowels

PHONEMES ALLOPHONES & EXAMPLES

/k uant a/ dried meat [k'wánt'a]

/k'uank ua/ 'language' [k'wánk'wa]

(7) /g/ [g] Voiced velar stop. It occurs in all positions

/gurz/ 'old' [gurz]

/goga/ 'hide' [góga]

/t agg/ calf' [t̪'ägg]

[g^{w}] Voiced velar labialized stop. It occurs in initial and medial positions preceding central vowels

/gomäcä/ antelop' [g^{w}ámäcä]

/guara/ back yard [g^{w}ára]

2.1.1.2 AFFRICATES: /č, č', j/ Among the Affricates /č'/ is modified by pharynx air mechanism; thus; it is referred to as Glottalized Affricate

PHONEMES ALLOPHONES & EXAMPLES

(8) /č/ [č] Voiceless alveopalatal affricate. It occurs in all positions

/čäg/ 'engagement' [čäg]

/wäčal/ 'to be able' [wóčal]

/wäkuč/ 'to fear [wókuč]

(9) /č'/ [č'] Voiceless alveopalatal glottalized affricate. It occurs in all positions.

PHONEMES	ALLOPHONES & EXAMPLES
	/č'ʉbʉr/ 'sun' [č'ʉ́bʉ́r]
	/moč'ʉ/ 'way' [móč'ʉ]
	/k'nač'č'/ 'flea' [k'ɨ́nač'č']
(10) /ǰ/	[ǰ] Voiced alveopalatal affricate. It occurs in all positions.
	/ǰilʉl/ 'small house' [ǰílʉ́l]
	/aǰǰis/ 'new' [áǰǰis]
	/wʉwaǰ/ to buy' [wówaǰ]

2.1.1.3 FRICATIVES: /f, s, z, š, ž, h/:

PHONEMES	ALLOPHONES & EXAMPLES
(11) /f/	[f] Voiceless labio-dental fricative It occurs in all positions.
	/folʉ/ 'back' [f^{w}álʉ́]
	/ʉfat/ 'milk' [ʉ́fat]
	/gallf/ 'tall' [gállif]
(12) /s/	[s] Voiceless alveolar fricative. It occurs in all positions.
	/sdban/ 'insult' [sidᵊan]
	/ansabi/ 'paternal uncle' [ánsabi]
	/guns/ 'bread [guns]
(13) /z/	[z] Voiced alveolar fricative It occurs in all positions.

PHONEMES ALLOPHONES & EXAMPLES

/zʉ̈mmi/ brother' [zʉ́mmi]

/wʉ̈zʉ̈la/ work [wózʉ̈la]

/wiz/ to hold [wiz]

(14) / š / [š] Voiceless alveopalatal fricative. It occurs in all positions

/šamma/ 'a large pot' [šámma]

/kʉ̈šš̈ʉ̈t/ 'lunch' [kʉ́šš̈ʉ̈t]

/wʉ̈šʉ̈š/ 'to rub' [wóšʉ̈š]

(15) /ž / [ž] Voiced alveo-palatal fricative. It occurs in all positions.

/žagba/ 'apounding tool' [žágba]

/ginžʉ̈/ 'saist' [ginžʉ́]

/wʉ̈ž/ 'to see' [wož]

(16) /h / [h] Voiceless glottal fricative. It occurs in all positions.

/honʉ̈/ it is' [hónʉ̈]

/dʉ̈hʉ̈/ you' [dʉ́hʉ̈]

/gulh/ clear' [gulɬh]

2.1.1 4 NASALS: /m, n, ň /:

PHONEMES	ALLOPHONES & EXAMPLES
(17) /m/	/ˆ m ˇ/ Voiced bilabial nasal. It occurs in all positions.
	/malä̈k'/ 'big' /ˆ málä̈k ˇ/
	/krman/ 'rainy season' /ˆ kírman ˇ/
	/kullm/ 'all' /ˆ kúllɨm ˇ/
(18) /n/	/ˆ n ˇ/ Voiced alveolar nasal. It occurs in all positions
	/nufg/ 'stingy' /ˆ nufg ˇ/
	/lända/ 'hide' /ˆ lände ˇ/
	/bäsestan/ 'church' /ˆ bäsestan ˇ/
	/ˆ ɱ ˇ/ Voiced labio-dental nasal. It occurs when immediately followed by /ˆ f ˇ/.
	/gänfo/ 'porridge' /ˆ gämfo ˇ/
	/ˆ ŋ ˇ/ Voiced velar nasal. It occurs when immediately followed by /ˆ k, k', g ˇ/
	/mänka/ about /ˆ mäŋka ˇ/
	/ank'äfo/ 'spoon' /ˆ áŋk'äfo ˇ/
	/däŋgassa/ container' /däŋgassa ˇ/
(19) /ň /	/ˆ ň ˇ/ Voiced alveo-palatal nasal. It occurs in all positions.

PHONEMES ALLOPHONE & EXAMPLES

/ ňňa/ 'we' /̄ ɨ́ňňa /

/äňňa/ 'sleep' /̄ ä́ňňa /

/tlabän/ 'yesterday' /̄ tɨ́laβän /

2.1.1.5 LIQUIDS: /l, r/:

PHONEMES ALLOPHONES & EXAMPLES

(20) /l/ /̄ l / Voiced alveolar lateral. It occurs in all positions.

/lbbäs/ 'cloth' /̄ lɨ́bbas /

/maläs/ 'small' /̄ málás /

/mal/ 'shame' /̄ mal /

(21) /r/ /̄ r / Voiced alveolar vibrant. It occurs in all positions.

/rgät'/ 'dance' /̄ rɨ́gät' /

/awwrar/ 'speech' /̄ áwwɨrar /

/t'äfr/ 'nail' /̄ t'äfɨr /

2.1.1.6 GLIDES: /y, w/:

PHONEMES ALLOPHONES & EXAMPLES

(22) /w/ /̄ w / Voiced rounded labio-velar semi-vowel. It occurs in all positions.

/wälläho/ 'neighbour' /̄ wólläho /

/gäwwa/ 'fool' /̄ gä́wwa /

/bayyäw/ 'his child' /̄ báyyäw /

PHONEMES	ALLOPHONES & EXAMPLES
(23) /y/	[y] Voiced palatal semi-vowel It occurs in all positions
	/yift/ 'before' [yift]
	/fäyya/ 'good' [fäyya]
	/ät'ay/ 'sheep' [ät ay]

2.1.2 THE INVENTORY OF THE CONSONANT PHONEMES

PHONEMES	EXAMPLES
(1) /b/ & /f/	a) /wäbrd/ 'to be cold'
	b) /wäfrd/ 'to judge'
(2) /t/ & /d/:	a) /tafa/ 'butrock'
	b) /dafa/ 'cause'
(3) /t/ & /t'/:	a) /wärät/ 'unsteadiness'
	b) /wärät'/ 'to cut'
(4) /k/ & /g/:	a) /mukkt/ 'a castrated ram'
	b) /muggt/ 'argument'
(5) /k/ & /k'/:	a) /wälak/ 'to send'
	b) /wälak'/ 'to grow up'
(6) /s/ & /z/:	a) /sar/ 'grass'
	b) /zar/ 'ritual'
(7) /s/ & /š/:	a) /wässal/ 'to make a vow'
	b) /waššal/ 'to ask'
(8) /š/ & /ž/:	a) /wäš/ 'to rub'
	b) /wäž/ 'to see'

PHONEMES	EXAMPLES
(9) /š/ & /č /:	a) /šalo/ he knew'
	b) /čalo/ 'he could'
(10) /č/ & /č'/:	a) /sač/ miss' (F)'
	b) /sač'/ hide' (F)'
(11) /ž/ & /j/:	a)/ažžo/ he saw
	b) /ajjo/ 'he pierced
(12) /m/ & /n/:	a) /amat/ In-laws
	b) /anat/ 'the top part of skull'
(13) /n/ & /ň/:	a) /mannäm/ 'who are they'
	b) /mañňäm/ 'he despised'
(14) /l/ & /r/:	a) /bällam/ 'he ate'
	b) /bärram/ it is lit'
(15) /h/ & /k/:	a) /yahl/ 'that equals'
	b) /yakkl/ 'let it be difficult'
(16) /w/ & /b/:	a) /wäj/ 'to pierce'
	b) /bäj/ 'by hand'

	BILABIAL	LABIO DENT.	DENT/ ALVEO	ALVEO PAL.	PALATAL	VELAR	GLOTTAL
STOPS	(p)*(p*)*		t t' d			k k^{w} k' k^{w} g g^{w}	
AFFRICATES			(ts')*	č č' ǰ			
FRICATIVES	f	f f^{w}	s z	š ž			h h^{w}
NASALS	m m^{w}	m̨	n	n̂ n̆		ŋ	
LIQUIDS		l	l r				
GLIDES	w				y		

Table I. PHONETIC CHART OF CONSONANTS

*/ P /, / p' / and / s' / occur only in borrowed words such as / Polis / 'Police', / P'etros / 'letter' and / s'alot / 'prayer' and are often substituted by /f/, /b/ and /t'/ respectively. All consonant phonemes, except /h/, occur long.

	BILABIAL	LABIO DENT	DENT/ ALVEO	ALVEO PAL.	PALATAL	VELAR	GLOTTAL
STOPS	b		t t' d			k k' g	
AFFRICATES				č č' j			
FRICATIVES		f	s z	š ž			h
NASALS	m		n	ň			
LIQUIDS			l r				
GLIDES	w				y		

Table II. PHONEMIC CHART OF CONSONANTS.

	b	d	t	t'	k	k'	g	ǰ	ǰ'	j	f	s
Cons.	+	+	+	+	+	+	+	+	+	+	+	+
Syll.	−	−	−	−	−	−	−	−	−	−	−	−
Son.	−	−	−	−	−	−	−	−	−	−	−	−
ant.	+	+	+	+	−	−	−	−	−	−	+	+
cor.	−	+	+	+	−	−	−	+	+	+	−	+
cont.	−	−	−	−	−	−	−	−	−	−	+	+
Nas.	−	−	−	−	−	−	−	−	−	−	−	−
Vd.	+	+	−	−	−	−	+	−	−	+	−	−
Del.Rel.	−	−	−	−	−	−	−	+	+	+	−	−
Str.	−	−	−	−	−	−	−	+	+	+	+	+
lat.	−	−	−	−	−	−	−	−	−	−	−	−
glot.cons	−	−	−	+	−	+	−	−	+	−	−	−
Rnd.	−	−	−	−	−	−	−	−	−	−	−	−

	z	ǯ	ž	h	m	n	ṉ	l	r	w	y
cons	+	+	+	+	+	+	+	+	+	−	−
Syll	−	−	−	−	−	−	−	−	−	−	−
son.	−	−	−	−	+	+	+	+	+	+	+
ant.	−	−	−	−	+	+	−	+	+	+	−
cor.	+	+	+	−	−	+	−	+	+	−	+
cont.	+	+	+	+	−	−	−	+	+	+	+
nas.	−	−	−	−	+	+	+	−	−	−	−
Vd	+	−	+	−	+	+	+	+	+	+	+
Del.Rel.	−	−	−	−	−	−	−	−	−	−	−
str.	+	+	+	−	−	−	−	−	−	−	−
lat.	−	−	−	−	−	=	−	+	−	−	−
glot.cons	−	−	−	−	−	−	−	−	−	−	−
Rnd.	−	−	−	−	−	−	−	−	−	+	−

Table III. DISTINCTIVE FEATURE MATRIX OF CONSONANTS.

2.1.3 VOWEL PHONEMES

In 'kɨstanɨńńa' we recognize six vowel phonemes, /i, e, a, ä, o, u/ classified into: (i) FRONT, CENTRAL, BACK, according to the position of the tongue: and (ii) HIGH, MID, LOW according to the height of the tongue. These vowels do not show length contrast as in consonants.

The vowel /ɨ/ is not treated as a phoneme since its occurrences are generally predictable in the structure. It only functions at a level of phonetic representation as an epenthetic vowel to break up two-term initial clusters and three-term clusters in other positions occurring in the underlying representation.

VOWEL PHONEMES: /i, e, a, ä, o, u/

PHONEMES	EXAMPLES
(1) /i/	/i/ High front unrounded vowel. It occurs in all positions. /iga/ water /iga/ /kitt/ 'two' /kitt/ /abi/ 'father /abi/
(2) /e/	/e/ mid front unrounded vowel It occurs in all positions. /egoste/ 'girl friends' /égoste/ /zega/ 'poor' /zéga/ /moyye/ 'mortar' /móyye/

PHONEMES	EXAMPLES
(3) /a/	[a] Low central unrounded vowel. It occurs in all positions.
	/at'ӓbӓt/ 'finger' [at ӓbӓt]
	/sӓbal/ 'wedding' [sӓbal]
	/mӓda/ 'a stool' [mӓda]
(4) /ӓ/	[ӓ] Mid central vowel. It occurs in all positions
	/ӓfur/ 'mouse' [ӓfur]
	/bӓy/ 'to say ok' [bӓy]
	/addarӓ/ 'friday' [addarӓ]
(5) /o/	[o] Mid back rounded vowel It occurs in all positions
	/of/ 'bird' [of]
	/moǩӓ/ 'way' [moǩ ӓ]
	/ank o/ 'egg' [ank o]
(6) /u/	[u] High back rounded vowel. It occurs in all positions.
	/ut ӓt/ 'monday' [ut ӓt]
	/k'urb/ 'near' [k'urb]
	/nt u/ 'clean' [nɨt u]

2 1 4 THE INVENTORY OF THE VOWEL PHONEMES

PHONEMES	EXAMPLES	
/i/ & /e/ :	a) /abi/	father'
	b) /abe/	give me'
/e/ & /ä/ :	a) /wore/	'news'
	b) /worä/	'month'
/ä/ & /a/ :	a) /äfät/	'rub' '
	b) /äfat/	'milk'
/o/ & /u/ :	a) /t'om/	'a fast'
	b) /t'um/	'fast' '

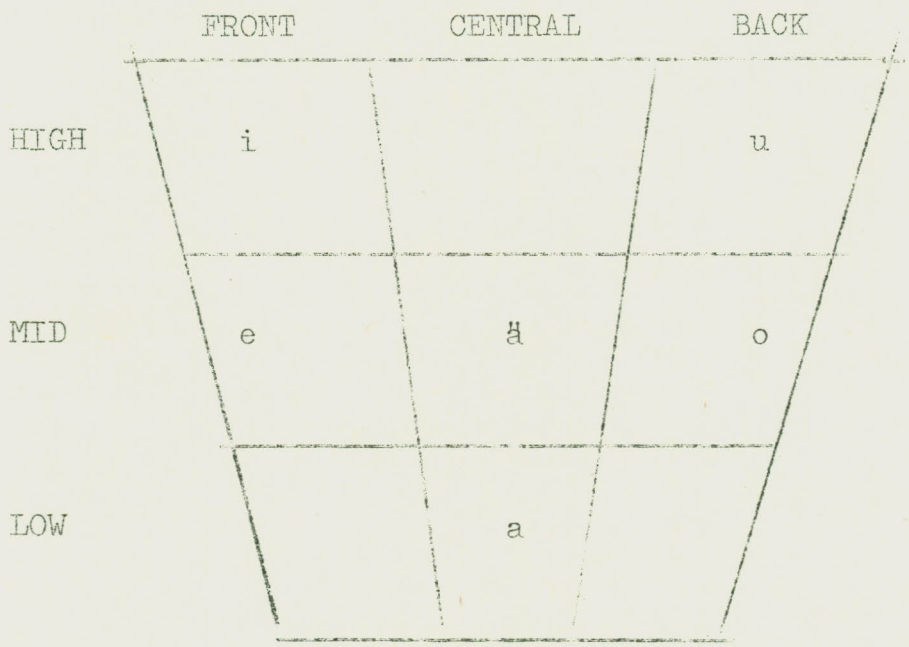


Table IV PHONEMIC CHART OF THE VOWELS

	i	e	a	ä	o	u
Syll.	+	+	+	+	+	+
Cons.	-	-	-	-	-	-
High	+	-	-	-	-	-
Low	-	-	+	-	-	-
Back	-	-	-	-	+	+
Tense	+	+	+	-	+	+

Table V. FEATURES MATRIX OF THE VOWELS

2.1.5 SEQUENCES AND CLUSTERS OF THE CONSONANTS

The language has no constraints in the occurrences of consonant sequences and clusters in the underlying representation. Two or more consonants could occur as sequences medially and clusters initially and finally.

However, at the level of phonetic representation, the language does not allow occurrence of more than two-term consonant clusters and consonant sequences, since an apenthetic vowel / i / is inserted in between Only in final position are two-term consonant clusters permitted in the language. Initial clusters, what is more, are restricted to stops immediately followed by liquids, but are optionally separated by the epenthetic vowel at the phonetic level.

The occurrence of more than two-term consonant clusters, and any consonantal combinations is permissible in the language at the phonological level.

Thus, we will examine the co-occurrence of stops with affricates, fricatives, nasals, liquids and glides in the following sections.

2.1.5.1 INITIAL CLUSTERS

Clusters of stops and liquids are optionally separated by the vowel /i/ disallowing the formation of initial clusters as in the alternative phonetic realizations of the underlying representation of the following examples:

STOPS: /b, t, t', k, k', g/ + /l, r/:

(1) a. /blat/ ⟶ [bɨlat] ~ [blat] 'trick'

b. /brndo/ ⟶ [birɨndo] ~ [brndo] 'uncooked lean meat'

(2) a. /tlä/ ⟶ [tɨlä] ~ [tlä] 'worm'

b. /tra/ ⟶ [tɨra] ~ [tra] 'let her excrete'

(3) a. /t'lä/ ⟶ [t'ɨlä] ~ [t'lä] 'quarrel'

b. /t'ra/ ⟶ [t'ɨra] ~ [t'ra] 'call!'

(4) a. /kla/ ⟶ [kɨla] ~ [kla] 'go away'

b. /krman/ ⟶ [kirɨman] ~ [krman] 'rainy season'

(5) a. /k'lawt/ ⟶ [k'ɨlawt] ~ [k'lawt]
be highly eager to get food'

b. /k'räs/ ⟶ [k'ɨräs] ~ [k'räs] 'start'

(6) a. /dläg/ ⟶ [dɨläg] ~ [dläg] 'slumber'

b. /dräs/ ⟶ [dɨräs] ~ [dräs] 'sing'

In the above examples, the vowel / i / is optionally used to break up initial clusters consisting of stops and liquids. Its presence or absence is determined by the tempo or formality of the utterance. Thus, the alternation in pronunciation may be formulated as follows:

(7) Epenthesis

$$\begin{bmatrix}+\text{cons}\\-\text{son}\\-\text{cont}\end{bmatrix} \quad \begin{bmatrix}+\text{cons}\\+\text{son}\\+\text{cor}\\+\text{cont}\end{bmatrix} \longrightarrow C \quad \begin{bmatrix}+\text{syll}\\+\text{high}\\-\text{back}\\-\text{tense}\end{bmatrix} \quad C$$

$$1 \qquad 2 \qquad 1 \qquad 2$$

or alternatively as:

(8) $$\emptyset \longrightarrow \begin{bmatrix}+\text{syll}\\+\text{high}\\-\text{back}\\-\text{tense}\end{bmatrix} \Big/ \begin{bmatrix}+\text{cons}\\-\text{son}\\-\text{cont}\end{bmatrix} \_\_ \begin{bmatrix}+\text{cons}\\+\text{son}\\+\text{cor}\\+\text{cont}\end{bmatrix}$$

2.1.5.2 MEDIAL CONSONANT SEQUENCE

The consonants coming one after another in medial position are interpreted as sequences, not as clusters, since the syllabic structure of the language does not allow the occurrence of medial clusters as may be seen in the following examples:

2.1.5.2.1 STOPS: /t/ + /b, č', f, m, l w/:

(1) /at-ba-la/ 'get it eaten' /atḄala/

(2) /wat-č'an/ to get it loaded' /watč an/

(3) /at-fäl-la/ 'have it boiled' /atfälla/

(4) /at mäskr/ have a witness' /atmäskir/

(5) /yit-läb-bä-su/ it may be worm' /yitläbbäsu/

(6) /wat-wzäy/ 'to get it done' /watwizäy/

2.1.5.2.2 AFFRICATES: /č / + /b, f, m, r, w/

(7) /tič'-bräb-bär/ 'he won't be cheated' /tič biräbbär/

(8) /täč'-faf-fär-äm/ 'it is scratched' /täč'faffäräm/

(9) /yäč'-mamk'/ 'let him hold it tight' /yeč'mamk'/

(10) /yač'-rars/ 'let him finish' /yeč'rars/

(11) /yič'-wo/ it stinks' /yič'wo/

2.1.5.2.3 FRICATIVES: /s/ + /b, č', f, m, l w/:

(12) /täs-bäs-sä-bo/ it is gathered /täsβässäβo/

(13) /as-č'nn/ 'make him drink' /asč'inn/

(14) /yäs-fr/ 'let him measure /yesfir/

(15) wäs-ma/ 'to hear' /wosma/

(16) /yi-mäs-lu/ 'he resembles' /yimäslu/

(17) /gä-säs-wam/ 'they refused her' /gäsäswam/

2.1.5.2.4 NASALS: /m/ + /b, č', s, n, l, w/:

(18) /säm-bät/ sabbath' /sämbät/

(19) /am-č'i/ 'that brings' /amč'i/

(20) /yim-säkkr/ that witnesses' /yimsäkkir/

(21) /yim-näzzr/ 'that makes changes' /yimnäzzir/

(22) /läm-läm/ 'ever green' /lämläm/

(23) /tsem-wat/ 'you (F) kiss her /tsemwat/

2.1.5.2.5 LIQUIDS: /l/ + /d, č', f, m, r, w/:

(24) /al-dä-bäl/ 'otherwise' /aldäβäl/

(25) /al-č'o-ňä/ 'he did not won' /alč'oňä/

(26) /yal-fu/ he will go' /yalfu/

(27) /yäl-ma/ 'let it grow' /yelma/

(28) /al-rä-gä-t'ä/ 'he did not dance' /alrägät'ä/

(29) /al-wa-ǰä/ 'he did not buy' /alwaǰä/

2.1.5.2.6 GLIDES: /w/ + /d, ǰ, z, n, l, y/ :

(30) /yaw-de/ 'let him tell me' /yawde/

(31) /aw-ǰu/ 'tell him' /awǰu/

(32) /täw-zäy-yo/ it is done' /täwzäyyo/

(33) /al-wä-lä-dä/ 'he did not have a child' /alwälädä/

(34) /al-aw-yätt/ 'she did not cry' /alawyätt/

2.1.5.3 FINAL CONSONANT CLUSTERS

Final consonant clusters which could have a maximum of four consonants in their underlying representation may be exemplified by the co-occurrence of stops with affricates, fricatives, nasals, liquids, and glides

2.1.5.3.1 STOPS: /d/ + /k', č, s, ň, r, y/ :

(1) /tiwädk'/ 'it does not fall' /tiwodk'/

(2) /wädčč/ are you told?' /wodičč/

(3) /wädš/ 'you told (F)' /wodš/

(4) /wädňň/ 'they told me' /wodiňň/

(5) /yadr/ 'that stays the night' /yadr/

(6) /yäwdyy/ 'in order to tell' /yewdiyy/

2.1.5.3.2 AFFRICATES: /č'/ + /d, s, n, r, y/:

(7) /yač'd/ 'that cuts' /yač'd/

(8) /wač's/ 'to smoke' /wač'is/

(9) /yač'nn/ 'that close it' /yač'inn/

(10) /ač'č'r/ 'short' /ač č'ir/

(11) /yač'yy/ 'in order to close' /yač'iyy/

2.1.5.3.3 FRICATIVES: /s/ + /d, č , n, l y/:

(12) /tiwäsd/ he does not take' [tiwosd]

(13) /wasč'/ to invite a drink' [wosč']

(14) /timäsl/ it does not seem' [timäsl]

(15) /yansnn/ 'which is not enough' [yansinn]

(16) /yansyy/ 'in order to be little' [yansiyy]

2.1.5.3.4 NASALS: /m/ + /k', č, s, n, r, y/:

(17) /yidämk'/ 'which is beautiful' [yidämk']

(18) /samčč/ 'are you kissed?' [samičč]

(19) /amš/ 'stay late at night' [amš]

(20) /yamn/ 'that trusts' /yamn]

(21) /yimr/ 'sun' [yimr]

(22) /yisämyy/ 'in order to kiss' [yisämiyy]

2.1.5.3.5 LIQUIDS: /r/ + /d, ć , z, m, y/:

(23) /yard/ 'that slaughters' [yard]

(24) /wärć / 'to sprinkle' [worč']

(25) /gurz/ 'old' [girz]

(26) /tiyarm/ 'not learning from mistakes' [tiyarm]

(27) /yawärryy/ 'in order to speak' [yawärriyy]

2.1.5.3.6 GLIDES: /w/ + /d, j́, s, n, r, y/:

(28) /wawd/ 'to tell' [wawd]

(29) /awj́/ 'tell(f)' [awj]

(30) /näwr/ 'nuisance' [näwr]

(31) /yaws/ 'let him lend' [yaws]

(32) /awń/ 'put it' [awn]

(33) /wawy/ 'to cry' [wawy]

2.1.6 SYLLABLE STRCUTURE

In order to determine the syllable strucutre of the language, we need to closely study the syllabic segments

Since vowels are the prominent segments in the syllable structure, we focus on segments, such as onset and coda, found before and after them, respectively.

On the one hand, a syllable may have a zero onset, or coda; and on the other, two or more onset, or coda clusters could be found in the underlying representation.

But at a phonetic level of representation, the occurrence of more than two-term consonant clusters are checked by the insertion of the epenthetic vowel /i/ in between Even the occurrence of two-term onset clusters are optionally separated by the vowel, as has been indicated in (2.1.5.1)

Thus, to determine the syllable structure of the language, we may need to distinguish between a phonetic and phonological level of representations, as in the following examples

(1) Phonetic level of representation:

ONSET	PEAK	CODA		
-	v	-	≠	/ˈi/ 'yes'
c	v	-	≠	/ˈbä/ 'by'
(c)c	v	c	≠	/ˈbɨlat/ /ˈblat/
-	v	c	=	/ˈäj́/ 'hand'
	v	c c	≠	/ˈart'/ flour'

According to the above chart (1) we have a two-term onset cluster which is optionally separated by the epenthetic vowel /ˈɨ/, and a two-term coda cluaster, thus forming the structure ((c)c)v(c c) at a phonetic level

(2) Phonological level of representation

ONSET	PEAK	CODA		
	v	-	=	/ i / 'yes'
c	v	-	=	/bä/ 'by'
cc	v	-	=	/kla/ 'go away'
ccc	v	c	=	/krman/ 'a rainy season'
cccc	v	-	=	/brndo/ 'uncooked lean meat'
-	v	cc	=	/awj́/ 'tell' (F)
-	v	ccc	=	/ač'č'r/ 'short'
c	v	cccc	=	/yäwdyy/ 'in order to tell'

According to chart (2), four-term onset and coda clusters may occur at a phonological level, thus forming

2.2 RULES OF PHONETIC REALIZATIONS.

2.2.1 PALATALIZATION

The process of superimposition of palatal articulation on non-palatal consonants may occur in the environments of front vowels.

In kistaniṅṅa, verbs in the 'imperfect' forms take suffixes, /-u/ and /-in/ as a result of the latter two major changes could take place: (i) palatalization, and (ii) vowel assimilation (umlaut).

Thus, if we compare the forms /ti-wäd-u/ 'you like (m), and /ti-wej-in/ 'you like(f), we observe an alternation, (i) d ⟶ ǰ / —— i, (ii) ä ⟶ e/ —— ǰ.

After palatalization of non-palatal, alveolar consonants, /d, t, t', s, z, n/ takes place resulting into their corresponding alveo-palatal consonanats, /ǰ, č, č', š, ž, ň/, the vowel /ä/ immediately before them assimilates to a front vowel /e/, as may be seen in the follwing examples:

	2nd P. Masc	2nd P. Fem
(1)	/ ti-säd-u / 'you distribute'	/ ti-seǰ-in /
(2)	/ ti-sät-u / 'you miss'	/ ti-seč-in /
(3)	/ ti-sät-u / 'you hide'	/ ti-seč'-in /
(4)	/ ti-gäss-u / 'you refuse'	/ ti-geśš-in /
(5)	/ ti-gärz-u / 'you become old'	/ ti-gerž-in /
(6)	/ ti-atänn-u / 'you smoke'	/ ti-ateňň-in /

According to the examples above, there are two significant changes: (i) palatalization in the environment of high front vowel, and (ii) the vowel / ä / assimilates to / e / in the environments of palatal consonants. These processes are ordered as follows:

(7) /twäd-in/ : underlying form
ǰ : palatalization
e : umlaut
i : epenthesis
/ tiweǰin / : Surface representation

The rule that changes alveolar consonants into their corresponding alveo-palatals may be formulated as follows:

(8) Palatalization:

$$\begin{bmatrix} +\text{cons} \\ -\text{syll} \\ +\text{cor} \\ +\text{ant} \end{bmatrix} \longrightarrow \begin{bmatrix} +\text{cons} \\ -\text{syll} \\ +\text{cor} \\ -\text{ant} \end{bmatrix} \Big/ \text{——} \begin{bmatrix} +\text{syll} \\ +\text{high} \\ -\text{back} \\ +\text{tense} \end{bmatrix}$$

2.2.2 LABIALIZATION

The labialized velar consonants /k^{W}, k'^{W}, g^{W}/ are treated as phonemes by Leslau,[13] who has given no reason why the labiovelars should be given phonemic status as distinct from other labialized consonants such as /m^{W}, f^{W}/ in the words /m^{W}ärä/ 'near' and /f^{W}älä/ 'back' found in his texts, and yet /m^{W}/ and /f^{W}/ are not treated as phonemic in his analysis.

Nevertheless, phonetically there is no difference between /k^{W}, k'^{W}, g^{W}/ and /m^{W}, f^{W}/ as far as labialization is concerned and from the point of view of their distribution, since they all occur in the environment of central vowels. In addition, labialized consonants only occur in initial and medial positions, exhibiting a gap in distribution, and lacking contrast with their nonlabialized counter parts.

Based on general principle of labialization, we assume that the labial and velar consonants followed by back vowels in underlying representation are labialized; and in the process, the back vowels /o/ and /u/ shift to the front, changing to their respective central vowels /ä/ and /ɨ/. Thus, (i) k+o ⟶ k^{W}o; k+u ⟶ k^{W}u and (ii) o ⟶ ä/c^{W}–; u ⟶ ɨ/c^{W} ___

Hetzron, in his brief discussion of labialization of the Gunnän-Gurage languages, says that 'sequences of noncoronal consonants and labial vowels are phonemically equivalent to sequences of labialized noncoronal consonants and central vowels' (hetzron, 1977:3).

Thus, labial and velar consonants immediately followed by back vowels are labialized; and as a result vowel shifting also takes place in the surface structure, as may be seen in the following examples:

(1) /morə̈/ ⟶ /[mʷə̈rə̈]/ 'near'

(2) /folə̈/ ⟶ /[fʷə̈lə̈]/ 'back'

(3) /gomə̈cə̈/ ⟶ /[gʷə̈mə̈cə̈]/ 'antelop'

(4) /kuya/ ⟶ /[kʷɨya]/ 'twenty'

(5) /k'urə̈t'ə̈mo/ ⟶ /[k'ʷɨrə̈t'ə̈mo]/ 'he bit'

In the above examples (1-5), labialization has taken place in the environment of back vowels at the level of underlying representation; and vowel shifting has also occurred in the process. Thus, the two processes may be derivationally stated in the following manner:

(6) /morə̈/ /kuya/ : underlying form

mʷora" kʷuya : labialization

mʷə̈ra" kʷɨya : vowel shifting

/mʷə̈rə̈/ /[kʷɨya]/: surface representation

Thus, the rule for the labialization of velar and labial consonants may be formulated in the following manner.

(7) Labialization:

$$\begin{bmatrix} +\text{cons} \\ -\text{syll} \end{bmatrix} \longrightarrow \begin{bmatrix} +\text{round} \end{bmatrix} \; / \; \_\_ \; \begin{bmatrix} +\text{syll} \\ -\text{cons} \\ +\text{round} \end{bmatrix}$$

2.2.3 NASALIZATION

Nasalization of vowel occurs in the language when a vowel is either immediately preceeded or followed by a nasal consonant

(1) /ˉzihóm_/ 'like this'

(2) /ˉahoňň_/ 'today'

(3) /ˉmanmān_/ 'separate'

(4) /ˉmās_/ 'a leather carpet'

The rule of nasalizing vowel occurring in the environment of nasal consonants may be stated as follows:

(5) Nasalization:

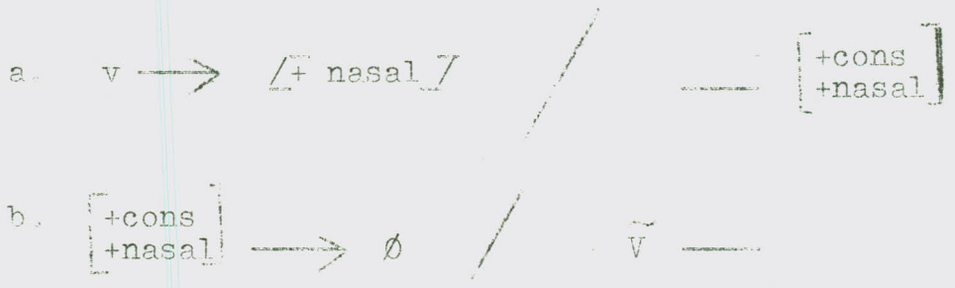
$$\overset{V}{v} \longrightarrow \text{/ˉ+ nasal\_/} \;/\; \left\{ \begin{bmatrix} +\text{cons} \\ +\text{nasal} \end{bmatrix} \_\_ \;\; \_\_ \begin{bmatrix} +\text{cons} \\ +\text{nasal} \end{bmatrix} \right\}$$

Vowel nasalization may also result in the deletion of nasal consonants in words like:

(6) /wändf/ to card /ˉwodɨf_/

(7) /gundl/ a fat sheep /ˉgudɨl_/

(8) Nasal Deletion:



Vowel nasalization and nasal deletion may be derivationally stated in the following manner

(9) /wändf/ : underlying form
wãndf : vowel nasalization
wãdf : nasal deletion
wãdif : epenthesis
/ wodif / : surface representation

(10) /gundl/ : underlying form
gũndl : vowel nasalization
gũdl : nasal deletion
gũdil : epenthesis
/ gũdil / : surface representation

2.2.4 HOMORGANIC NASAL ASSIMILATION

The assimilation of a nasal consonant /n/ to the position of velar consonants /k, k', g/, bilabial consonant /b/, labial fricative /f/, and alveopalatal /č', ǯ/ occurs in the language when the nasal is immediately followed by these segments. This process of homorganic nasal assimilatiom may be seen in the following examples:

(1) /mänka/ ⟶ /ˉmäŋkaˍ/ 'about'

(2) /ank'äfo/ ⟶ /ˉaŋk'äfoˍ/ 'spoon'

(3) /sängn/ ⟶ /ˉsäŋginˍ/ 'wall'

(4) /yizänbu/ ⟶ /ˉyizämbuˍ/ it rains'

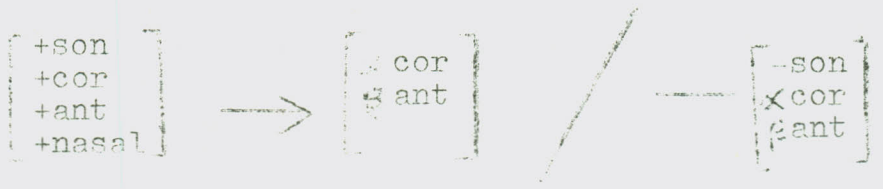
(5) /gänfo/ ⟶ /ˉgämfoˍ/ porridge

(6) /anč ot/ ⟶ /ˉanč'otˍ/ mat

(7) /ginzä/ ⟶ /ˉgiǹǯäˍ/ waist

In the examples (1,2,3), there is an assimilation of /n/ to /ˉŋˍ/ because of the adjacent velar consonants /k, k', g/. In (4) the change of /n/ to /ˉmˍ/ occurs when immediately followed by /b/. In (5) the assimilation of /n/ to /ˉmˍ/ occurs in a rapid speech when immediately followed by /f/. The assimilation of /n/ to /ˉǹˍ/ in (6 & 7) occurs when /n/ is immediately followed by alveo-palatals /č', ǯ/. Thus:

(8) Nasal Assimilation:



2 2 5 CONSONANT ASSIMILATION (LENGTH)

When two morphemes are adjoined to one another the final segment of the first morpheme optionally assimilates to the adjacent segment of the second morpheme

(1) /at + śo/ ⟶ /aššo/ 'it is needed'

(2) /at + šäkkt/ ⟶ /aššäkkt/ 'get it mended'

(3) /at + zibbäro/ ⟶ /azzibbäro/ 'he got it back'

(4) /mmt + däh/ ⟶ /mmiddäh/ 'your monther'

(5) /täśal + käm/ ⟶ /täśakkäm/ 'you asked'

(6) /kit + sänbät/ ⟶ /kissämbät/ 'two weeks'

From the above examples, we can see that the consonant /t/ assimilates to the adjacent consonants /ś/, /d/ and /s/ as in examples (1, 4, 6) Such assimilatory processes may be derivationally expressed in the following manner.

(7) /at + šo/; /mmt + däh/; /kit + sanbät/: underlyinf form

š d s : consonant assimilation

/ aššo /; / immiddäh /; / kissämbät / : surface representation

Thus, the rule of consonant assimilation may be formulated as follows:

(8) Consonant Assimilation:

VC + CV ⟶ VCCV

12 34 1334

2.2.6 VOWEL ASSIMILATION

In 'kistaniňňa' shifting of central vowels to front or back position is a common occurrence in the environment of /y/ and /w/, respectively

The change of the vowel /ä/ to / e / in the environment of / j / as in the word / tiwejin / 'you like (f)', is also a common occurrence in the language as has been indicated in 2.2.1

Furthermore, the vowel /ä/ of the prefixes, /yä/ and /wä/ assimilates to the preceding glides, resulting in front or back vowels, respectively.

(1) /yä + goši/ ⟶ [yegoši] 'the boy's'

(2) /wä + bäl/ ⟶ [wobäl] 'to say'

In (1) the vowel /ä/ of the underlying form which immediately follows the palatal /y/ and precedes a consonant is fronted to [e]. Thus, the rule of fronting /ä/ to [e] may be formulated in the following manner.

(3) Vowel Fronting:

$$\begin{bmatrix}+\text{syll}\\-\text{high}\\-\text{low}\\-\text{back}\\-\text{tense}\end{bmatrix} \longrightarrow \begin{bmatrix}+\text{syll}\\-\text{high}\\-\text{low}\\-\text{back}\\+\text{tense}\end{bmatrix} \Big/ \begin{bmatrix}-\text{cons}\\-\text{syll}\\+\text{son}\\+\text{cor}\end{bmatrix} \text{---} [+\text{cons}]$$

The vowel /ä/ in the underlying form of morpheme immediately following /w/ and preceding a consonant also shifts to the back vowel [o].

Thus, the backing rule may be formulated in the following manner.

(4) Vowel Backing:

$$\begin{bmatrix}+\text{syll}\\-\text{high}\\-\text{low}\\-\text{back}\\+\text{tense}\end{bmatrix} \longrightarrow \begin{bmatrix}+\text{syll}\\-\text{high}\\-\text{low}\\+\text{back}\\+\text{tense}\end{bmatrix} \Big/ \begin{bmatrix}-\text{cons}\\-\text{syll}\\+\text{round}\end{bmatrix} \text{---} [+\text{cons}]$$

2.2.7 INTERVOCALIC WEAKENING

Hetzron, in his discussion of 'root-consonant alternation in the Gunnän-Gurage languages, does not mention the existence of the process in 'kistaniňňa' [14] But in 'kistaniňňa' stops /b, k/ show alternation with their respective continuants /β, h/ in intervocalic position, as in the following examples:

(1) /bä + kit/ ⟶ /bähit/ 'at two'

(2) /fäyya + kom/ ⟶ /fäyyahom/ 'as good'

(3) /nä + bayy/ ⟶ /näβayy/ 'to a child'

(4) /bä + bärr/ ⟶ /bäβärr/ 'at door'

In (1,2,3,4), we can see the spirantization of stops (b, k/ to their respective continuants /β, h/ between vowels. Thus, rule of alternation between stops and continuants may be formulated in the following manner.

(5) Consonant Alternation:

$$\begin{bmatrix} +\text{cons} \\ -\text{syll} \\ -\text{cor} \\ -\text{cont} \end{bmatrix} \longrightarrow /+\text{cont}/ \;/\; /+\text{syll}/ \text{---} /+\text{syll}/$$

2.2.8 VOWEL REDUCTION

When two vowels occurring in different morphemes form sequences at the level of underlying representation, it is always the first vowel, /ä/, which is deleted. But this rule does not apply when two tense vowels occurring in different morphemes meet, instead glides are formed between them (see Glide formation)

Thus, the lax vowel /ä/ occurring in the prefixes of the following examples is deleted.

(1) /bä + iga/ ⟶ [biga] 'by water'

(2) /yä + abi/ ⟶ [yabi] 'father's'

(3) /wä + ab/ ⟶ [wab] 'to give'

(4) /wä + iz/ ⟶ [wiz] 'to hold'

In (1,2,3 & 4), the lax vowel /ä/ is always deleted when it forms a sequence with tense vowels. Thus, a vowel deletion rule may be formulated as follows.

(5) Vowel Deletion:

$$\begin{array}{cccccccc} \# & C & \begin{bmatrix} +syll \\ -high \\ -low \\ -back \\ -tense \end{bmatrix} & + VC & \longrightarrow & \# & CVC \\ 1 & 2 & 3 & 45 & & 1 & 245 \end{array}$$

Furthermore, the lax vowel /ä/ found between consonants in a stem is also deleted when forming a sequence with prefix, as may be seen in the following examples:

(6) /yä + tälak/ ⟶ [yetlak] 'let him be sent'

(7) /wä + täšamäk/ ⟶ [wotšamäk] 'to lean'

In the examples (6, 7) the lax vowel /ä/ found between consonants in the stem is deleted when forming a sequence with prefix. Since the language only stresses the first syllable in Disyllabic and Trisyllabic words, the vowel /ä/ in the unstressed syllable is deleted. Thus, a vowel deletion rule may be formulated as follows:

(8) Vowel Deletion:

$$CV + C \begin{bmatrix} +syll \\ -high \\ -low \\ -back \\ -tense \end{bmatrix} \quad CV \longrightarrow \quad CVCCV$$

12 3 4 56 12356

2.2.9 VOWEL INSERTION

In 'kistanimma' there is no constraint in the occurrences of more than two-term initial and final consonant clusters at the level of phonological representation; but at the level of phonetic representation, the language neither allows two-term initial clusters, except in words with stops immediately followed by liquids, nor a three-term consonant cluster or sequence in other positions.

Thus, the occurrences of two-term initial clusters and three-term consonant clusters (or sequences) in other positions in the words are disallowed by the insertion of the epenthetic vowel /ɨ/ The rules of epenthetic vowel insertion may be formulated as follows:

(1) $\emptyset \longrightarrow$ /ɨ/ / # ——— CC

(2) $\emptyset \longrightarrow$ /ɨ/ / # C ——— C

(3) $\emptyset \longrightarrow$ /ɨ/ CC(+) ——— C (#)

(4) $\emptyset \longrightarrow$ /ɨ/ / (#) C ——— CC (#)

Rule (1) mostly disallows initial geminate clusters, as in the following examples:

(5) /ñña/ $\longrightarrow$ /ɨñña/ 'we'

(6) /mmit/ $\longrightarrow$ /ɨmmit/ 'mother'

Thus, epenthesis rule (1) may be formulated as follows:

(7) Epenthesis (R 1)

$$\begin{array}{ccccccc} \# & CC & \longrightarrow & \# & \left[\begin{array}{l}+\text{syll}\\+\text{high}\\-\text{back}\\-\text{tense}\end{array}\right] & C & C \\ 1 & 23 & & 1 & & 2 & 3 \end{array}$$

Rule (2) disallows all occurrences of initial clusters, except those consisting of stops immediately followed by liquids, to which the rule applies optionally to break up the clusters But the rule applies to other initial clusters occurring at the level of phonological representation

(8) /slät/ ⟶ [silät] 'a vow'

(9) /wzat/ ⟶ [wizat] 'sweat'

(10) /k'nač'č/ ⟶ [k'inač'č] 'flea'

Thus, epenthesis rule (2) may be formulated as follows:

(11) Epenthesis (R 2)

$$\begin{array}{ccccccccc} \# & C & C & \longrightarrow & \# & C & \left[\begin{array}{l}+\text{syll}\\+\text{high}\\-\text{back}\\-\text{tense}\end{array}\right] & C \\ 1 & 2 & 3 & & 1 & 2 & & 3 \end{array}$$

Rule (3) disallows three-term medial consonant sequences occurring as a result of the juxta-position of morphemes, and final occurrences of three-term consonant clusters, that is, a consonant immediately preceded by geminate clusters

(12) /yift + ki/ ⟶ [yiftihi] 'her face'

(13) /gällf/ ⟶ [gällif] 'tall'

Thus, epenthesis rule (3) disallowing the occurrence of three-term medial consonant sequences of the juxtaposition of morphemes, and three-term final clusters, that is, a consonant preceded by geminate clusters,

may be formulated as follows:

(14) Epenthesis (R 3):

$$C \quad C \ (+) \quad C \quad (\#) \longrightarrow C \quad C \begin{bmatrix} +\text{syll} \\ +\text{high} \\ -\text{back} \\ -\text{tense} \end{bmatrix} C \quad (\#)$$
$$1 \quad 2 \qquad 3 \qquad\qquad 1 \quad 2 \qquad\qquad 3$$

Rule (4) disallows medial sequences of three-term consonants, and three-term initial and final clusters in words when a consonant is immediately followed by a geminate clusters This rule breaks up sequences or clusters /ccc/ into / c-cc /, unlike rule (3) with / cc-c /.

(15) /srri/ ——> / sirri / 'wheat'

(16) /mkňňat/ ——> / mikiňňat / 'cause'

(17) /ăd̆ăbll/ ——> / ăd̆ăbill / 'it is not'

Thus, epenthesis rule (4) breaking up three term medial consonant sequences, and three-term initial and final clusters may be formulated as follows:

(18) Epenthesis (R. 4)

$$(\#) \quad C \ C \ C \quad (\#) \longrightarrow (\#)C \begin{bmatrix} +\text{syll} \\ +\text{high} \\ -\text{back} \\ -\text{tense} \end{bmatrix} C \ C \ (\#)$$
$$1 \ 2 \ 3 \qquad\qquad 1 \qquad\qquad 2 \ 3$$

The above epenthetic vowel insertion rules can be collapsed into one rule as follows:

(19) Collapsed Epenthesis (R. 1-4)

$$\emptyset \longrightarrow \begin{bmatrix} +\text{syll} \\ +\text{high} \\ -\text{back} \\ -\text{tense} \end{bmatrix} / \begin{Bmatrix} / \ \# \text{ —— } cc \ / & (1) \\ / \ \# c \text{ —— } c \ / & (2) \\ / \ cc(+)c(\#) \ / & (3) \\ / \ (\#)c\text{-}cc(\#) \ / & (4) \end{Bmatrix}$$

2 2 10 GLIDE FORMATION

In 'kistaninna' when two vowels occurring at the boundaries of different morphemes meet, the first vowel, which is usually a lax vowel, is deleted. But when two tense vowels occurring at the boundaries of different morphemes meet, no deletion occurs, instead glides, with /y/ and /w/ occuring between the vowels, are formed.

(1) /ge + i/ ⟶ /geyi/ 'the house'
(2) /yibälo + i/ ⟶ /yibäloyi/ 'that is eaten'
(3) /yarašu + i/ ⟶ /yaräšuyi/ that is built'
(4) /aräši + očč/ ⟶ /aräšiwočč/ 'wicked people'
(5) /šämane + očč/ ⟶ /šämanewočč/ weavers'
(6) /änsisa + očč/ ⟶ /änsisawočč/ 'animals'

As can be seen from the above examples, the formation of glides, with /y/ and /w/ occurs only when the vowels /i/ and /o/ are found in the suffixes attached to the stems.

Thus, the glide formation rule may be formulated as follows:

(7) Glide Formation:

$$\emptyset \longrightarrow \begin{bmatrix} -\text{cons} \\ -\text{syll} \\ +\text{son} \\ \alpha\text{back} \end{bmatrix} \Big/ \quad /{}^{a}_{+\text{syll}}/ \; \_\_ \; \begin{bmatrix} +\text{syll} \\ \alpha\text{back} \end{bmatrix}$$

2.3 SUPRASEGMENTALS

kistaniňňa is classified as a non-tonal language. Consonant length, pitch and stress have only phonetic values, and their occurrences are fixed and predictable. Only in very few words, consonant length distinguishes meanings.

Morphologically consonants optionally assimilate to their adjoining consonants resulting in long consonants. However, in some cases, the occurrence of consonant length is predictable, since it is fixed to the penultimate and ultimate syllables of verb and noun forms, respectively.

The occurrence of high, as opposed to low pitch, is also predictable at word level structure. It occurs on initial syllables in all words, except in monosyllables, and spreads to the second and third syllables of quadrisyllabic and polysyllabic words, respectively.

High pitch serves as the exponent of stress; the occurrence of stress is only recognized by the presence of high pitch.

Furthermore, in the fluctuation of contour tones, high pitch may also represent the accentuation of words or phrases for semantic reasons.

The intonation patterns of the language comprise high, low, rising and falling pitches which may be accompanied with short or long pauses between phrases and sentences, respectively, and the use of slow or fast tempo.

2.3.1 LENGTH

In kistaniñña' all consonants may occur long except /h/; however they only distinguish meanings in very few words such as:

(1) a /ämayyä/ 'uncle'

b /ämmayyä/ 'stone'

(2) a /goš/ 'boy'

b /goššš/ 'buffalo'

(3) a /šama/ 'candle'

b /šamma/ 'water container'

Furthermore, consonant length may result from an optional consonant assimilation rule such as:

(4) /at + so/ ⟶ [asso] 'it is needed'

(5) /at + gaddälo/ ⟶ [aggaddälo] 'caused to kill each other'

(6) /täšal + käm/ ⟶ [täšakkäm] 'you asked'

Consonants occurring in ultimate syllables of few noun forms are long as may be seen in the following examples:-

NOUNS:

(7) /tibba/ dust

(8) /gulmassa/ 'youngster'

(9) /ärähañña/ pen'

Consonants occurring in penultimate syllables of the verb in perfect forms are often long:

VERBS:

(10) /säbbäro/ 'he broke'

(11) /tikkälo/ 'he boiled'

(12) /č'affäro/ 'he scratched'

(13) /mnäzzäro/ 'he made a change'

2 3 2 PITCH & STRESS

In kistaniññă' four pitch levels; High, Low, Rising and Falling may be distinguished.

High as opposed to Low pitch occurs at the level of word structure as well as at the level of sentence structure forming the intonation of sentence. The gliding pitches: Rising and Falling only occur as parts of the intonation.

The occurrence of high pitch is predictable. It is fixed on the initial syllables of all words, except monosyllabic words. It also spreads to the second and third syllable of quadrisyllabic and poly-syllabic words, respectively, as may be seen in the following examples:

(1) Monosyllables:

[zi]	'this'
[kärr]	'horn'
[mɨss]	'husband'
[sɨnn]	'tooth'

(2) Disyllables

[móra]	'near'
[dáfà]	'cause'
[gä́wwà]	'fool'
[ámä̀d]	'ash'
[wówàǰ]	'to buy'

(3) Trisyllables:

[gulmássà]	'youngster'
[k'út'isù]	'younger'
[mä́lkàmma]	'beautiful'
[kóčícča]	'coward'
[tiláǰänn]	'yesterday'

(4) Quadrisyllables:

[álállä̀zì]	'otherwise'
[yáɨdádɨ̀rrà]	'first'
[ä́táɨ̀yyä̀]	'paternal uncle'

(5) Polysyllables:

[gä́dä́lä̀klyà]	'mountain goat'
[íngɨ́däggä̀dò]	'it trembled'

In the examples (2,3,4,5), the high pitch marked [/] as opposed to low [\ ] is fixed on the initial syllables of words, and also spreads to the second and third syllables of the quadrisyllabic and polysyllabic words, respectively. Thus, the occurrences of high pitch may be summarized in the following rule:

(6) Pitch:

$$S \longrightarrow [\,+\text{high pitch}\,] \;/\; \# \_\_ (s(s))s\ s\ \#$$

The occurrence of high pitch fixed on the first syllables of the words may be considered as a universal feature

The first part of an utterance receives the strongest bellows-like pressure from the lung and becomes higher in pitch than what follows.[15]

In this respect, we realize that high pitch produces greater amplitude than low pitch. Thus, high pitch is the most important phonetic exponent of stress.[16]

In kistanimma high pitch, therefore, serves as exponent of stress. The stress rule may be expressed as:

(7) Stress:

$$S \longrightarrow [\,+\text{stress}\,] \;/\; \# \frac{\qquad}{[\,+\text{high pitch}\,]} (s(s))s\ s\ \#$$

2.2.3 INTONATION

In kistaninna the intonation patterns which distinguish meanings at phrases and sentence levels are: High, Low, Rising and Falling pitches accompanied with short and long pauses to mark tone-groups in phrases, and sentences, respectively, and slow and fast tempo to reflect the attitude of the speaker such as, 'excitement' and giving 'order'.

High pitch serves to accentuate words or phrases in a sentence, and to give emphasis for particular words for semantic reason.

The gliding pitches, Rising and Falling serve to indicate question and statement, respectively, at the end of the sequences of pitch in a sentence.

QUESTION: In forming yes-no questions, the sequences of pitches, which normally descend from high to low, are marked by the rising pitch at the end of a sentence.

(1) bayyaccï fäyya näm 'are the boys good?'

'boys-the good they are

But when we form a question with question-words: /min/ 'what'; /manni/ 'who', etc. the intonation pattern is different. It is similar to that of a statement, since the sequences of pitches normally end in falling pitch.

(2) min goyin yämät't at 'when did she come?'

'what time-at that-came-she'

STATEMENT: when a normal statement is made, the intonation contour ends in falling pitch.

(3) fäyya näm 'they are good'

'good they are'

(4) Zihom ädäpill 'It is not like this'

'this-like it is not'

ORDER: when giving order, a speaker uses a fast tempo of utterance accompanied with emphasis on a particular word.

(5) wit a bazi ge 'get out of this house'

'get out-you from this house'

(6) yäʕayyi attiɣdälla 'Don't kill the child'

'of child-the don't kill her'

EMPHASIS: The use of high pitch for accentuation, and a slow tempo of utterance may be used in a particular word to give it prominence over the others for semantic reason.

(7) zi kulliim fäyyan 'they are all good'

'this a-ll it is good'

(8) wärk' yämässälätgäräd na she is like a gold'

'g - o - ld that seem-she girl-she is'

EXCITEMENT: when a speaker expresses a sentence with excitement, he may utter it with a very slow tempo, and almost in monotone by accentuating every syllable

(9) abet azi goy yallä dästa

'Oh' at that time that there is happiness'

'Oh' what a happiness there will be at that tim[illegible]'

(10) abet bayyidi yagäʕa goy

'Oh! son-my when-marry time'

'Oh! when my son is going to marry ...'

3. SUMMARY AND CONCLUSION

In kɨstanɨnna there are twenty three consonant and six vowel phonemes.

The inventory of consonant phonemes comprises stops /b,d,t,t ,k,k',g/, affricates /č, č', ǰ/, fricatives /f,s,z,š,ž,h/, nasals /m,n,ń/, liquids l, r/, and glides /y, w/

The vowel phonemes comprise front vowels /i,e/, central vowels /ä, a/, and back vowels /o, u/.

The vowel / ɨ / is inserted at the phonetic level by means of an epenthetic vowel insertion rule to disallow two-term initial, and three-term medial consonant sequences and final clusters that occur in the underlying representation.

At the phonological level of representation, there are no constraints disallowing two or more clusters of consonants, thus four-term initial and final clusters such as the structure (cccc) v (cccc) occurs

At the phonetic level of representation, however, initial and final clusters are allowed. But initial clusters are restricted to stops immediately followed by liquids which may be optionally separated by the vowel / ɨ /

PALATALIZATION: In the imperfect forms of the verb, palatalization takes place in the environment of front vowels, thus, changing non-palatal alveolar consonants /d,t,t',s,z,n/ to their corresponding alveo-palatal consonants /ǰ, č, č', š, ž, ń/

LABIALIZATION: Labial and velar consonants immediately followed by back vowels are labialized. Thus, since the labialized consonants such as, /k^{w}, k'^{w}, g^{w}/ result from the application of the labialization rule, they are treated as allophonic variants of /k, k', g/ respectively.

NASALIZATION: When a vowel is either immediately preceded or followed by a nasal consonant, vowel nasalization takes place. And in some cases, this is followed by a deletion of the nasal consonant after the vowel has been nasalized.

HOMORGANIC NASAL ASSIMILATION: The assimilation of the nasal consonant /n/ to the position of velar consonants /k, k', g/, the bilabial consonant /b/, the labial fricatives /f/, and alveo-palatales /č', ž/ occurs when /n/ is immediately followed by velar, bilabial, labiodental and alveopalatal, respectively.

CONSONANT ASSIMILATION (LENGTH): When two morphemes join together, the final consonant of the first morpheme optionally assimilates to the initial consonant of the second morpheme, resulting in a long consonant.

VOWEL ASSIMILATION: In the process of palatalization, the central vowel /ä/ change to /e/. In addition, the vowel /ä/ of the prefixes /yä, wä/ assimilates to the preceding glides resulting in front or back vowels, respectively.

INTERVOCALIC WEAKENING: Stops /b, k/ show alternation with their respective continuants /β, h/ between vowels.

VOWEL REDUCTION: When two vowels occurring at the boundaries of different morphemes meet, the first vowel is deleted if it is a lax vowel /ä/. Furthermore, the lax vowel /ä/ found between consonants in the stem is also deleted when the stem forms a sequence with prefix.

VOWEL INSERTION: The occurrence of two-term initial clusters and three-term clusters (or sequences) in other positions in the word are disallowed at the phonetic level by the insertion of the epenthetic vowel /i/.

GLIDE FORMATION: When two tense vowels occurring at the boundaries of different morphemes meet, glides /y/ and /w/ are formed between the vowels.

SUPRASEGMENTALS: kistaniňňa is a non-tonal language. Length, pitch and stress occur at the phonetic level; they are predictable.

LENGTH: All consonants, except /h/ occur long. Consonants occurring at morpheme boundaries may optionally assimilate to their adjacent consonant, resulting in long consonants. In some cases, consonant length is predictable; it is fixed on the penultimate and ultimate syllables of verbs and nouns, respectively.

PITCH & STRESS: 'kistaninna' has four pitch level distinguished as High, Low, Rising and Falling.

The occurrence of high as opposed to low pitch is predictable; it occurs on initial syllables in all words, except in monosyllables, and on the antepenult syllable of quadrisyllabic and polysyllabic words.

High pitch serves as an exponent of stress. It also functions to accentuate words or phrases for semantic reasons. Rising and Falling pitches mark questions and statements, respectively.

INTONATION: The intonation patterns of the language comprise high, low, rising and falling pitches, accompanied with short or long pauses between phrases or sentences, respectively. The occurrence of slow and fast tempo of utterances reflects the attitudes of the speaker.

NOTES:

1 Robert Hetzron, "Reviews of Books" Ethiopians Speak: Studies in Cultural Backgrounds 111 Soddo (Reprinted from Journal of the American Oriental Society New Haven, 1970 V. 90 N.4 p 561-568).

2 Hans Jakob Polotsky, "Notes on Gurage Grammar" (Jerusalem, 1951, 58 p The Israel Oriental Society, Oriental notes and studies no 2), p.5.

3. Wolf Leslau, Ethiopians Speak, Studies in Cultural Backgrounds 111. Soddo. University of California Press, 1968), p v.

4 M L Bender and Others (eds) Language in Ethiopia (London: Oxford University Press, 1976), p. 28.

5 Gideon Goldenberg, "kastanaňňa Studies in Northern Gurage language of Christians" (Reprinted from Orientalia Suecana Uppsala, 1969, V 17 (1968), p 61-102) Miscellanea, l, p 62.

6. Ibid , p 63

7 R Hetzron, p 562.

8. G. Goldenberg, p 67.

9 Robert Hetzron, Gunnän-Gurage Languages (Napoli, Istituto Orientale di Napoli, 1977, 264 p.), p. 3.

10. Ibid., p. 3.

11. Ibid., p. 34

12. Ibid., p. 35

13 W Laslau, p. 6.

14 R. Hetzron, p 50

15 Dwight Bolinger, Intonation (penguin Books Lts., 1972), p 20

16 Rudolf P Botha, Methodological Aspects of Transformation Generative Phonology (Netherland: Mouton & Co N.V., Publishers, The Hague, 1971), P. 207.

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DECLARATION

I, the undersigned, declare that the thesis is my original work and has not been presented for a degree in any other University.

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SIGNATURE: