Series a gc's Class		"this, these" Morphemic Structure	MR	Phonemic Forms	"that, those" Morphemic Structure	MR	Phonemic Forms
14	hu	V^1-hu	17,7	uhwu	V^1-hu-o	18,2	uhwo
15	ku	V^1-ku	17,9	uku	V^1-ku-o	18,3	uko
16	pa	V^1-pa	17,9	apa	V^1-pa-o	18,1	apo
17	ku	V^1-ku	17,9	uku	V^1-ku-o	18,3	uko
18	mu	V^1-mu	17,9	umu	V^1-mu-o	18,1	umo

The forms glossed "this, these" indicate "relatively near the speaker in space or concept." The forms glossed "that, those" indicate "relatively remote in space or concept."

4.1.5. Selector

A selector is a word which consists of one of the series a gender concords and one of the three selector stems listed below. The stems can occur with all the gender concords of series a.

Summary: + G:gc a + NUC: selector stem

Selector Stems

-no (specifically near the speaker in space or concept; "this right here")

-ye (specifically remote from the speaker in space or concept; "that out of sight, that previously referred to")

-pi (which?)

Series a gc's Class		MR	"this,these"	"that,those"	"which?"
1	u-	12,19	úno	úye	úpi
2	va-	9,19	váno	váye	vápi
3	u-	12,19	úno	úye	úpi
4	i-	12,19	íno	íye	ípi
5	ri-	9,19	ríno	ríye	ripi
6	a-	12,19	áno	áye	ápi

Series a go's Class		MR	"this, these"	"that, those"	"which?"
7	ci-	9,19	cíno	cíye	cípi
8	zvi-	9,19	zvíno	zvíye	zvípi
9	i-	12,19	íno	íye	ípi
10	dzí	9,19	dzíno	dzíye	dzípi
11	ru-	7,19	rwúno	rwúye	rwúpi
12	ka-	9,19	káno	káye	kápi
13	tu-	7,19	twúno	twúye	twúpi
14	hu-	7,19	hwúno	hwúye	hwúpi
15	ku-	9,19	kúno	kúye	kúpi
16	pa-	9,19	páno	páye	pápi
17	ku-	9,19	kúno	kúye	kúpi
18	mu-	9,19	múno	múye	múpi

4.1.6. Pronoun

A pronoun is a word which:-

(a) in the 1st and 2nd persons consists of a gender concord of series o

(b) in class 1 consists of /i-/ ("stabiliser") and the class 1 gender concord of series o

(c) in classes 2 to 18 consists of /i-/, a gender concord of series d, and the morpheme {-o}

Summary: (a) I,II: + G:go $d\{^{I}_{II}\}$

(b) 1: + /i-/ + G:go o 1

(c) 2-18: + /i-/ + G:go o 2-18 + *NUC:{-o}*

The segment /i-/ is dictated by phonological requirements and is subject to MR 48 for its tonal realisation. In the adverbial and possessive inflections of pronouns /i-/ may be retained or dropped.

Series c gc's Person/class		MR	Phonemic Forms
Is	iní	13	iní
Ip	isú	13	isú
IIs	iwé	13	iwé
IIp	imí	13	imí
1	-yè	9	íye
2	-va-	1,18	ívo
3	-u-	10,18	íwo
4	-i-	10,18	íyo
5	-ri-	1,18	íro
6	-a-	10,18	íwo
7	-ci-	1,18	íco
8	-zvi-	1,18	ízvo
9	-i-	10,18	íyo
10	-dzi-	1,18	ídzo
11	-ru-	2,18	írwo
12	-ka-	1,18	íko
13	-tu-	2,18	ítwo
14	-hu-	2,18	íhwo
15	-ku-	3,18	íko
16	-pa-	1,18	ípo
17	-ku-	3,18	íko
18	-mu-	1,18	ímo

4.1.7. Quantitative

A quantitative is a word which consists of one of the series a gender concords, the morpheme {-e-}, and one of the two quantitative stems listed below.

Summary: + G:gc a + QUANT: {-e-} + NUC:quantitative stem

The morpheme {-e-} is subject to morphophonemic rule MR 41. The morphophonemic rules applicable to the gender concords are indicated below.

Quantitative Stems

-ga (alone)
-sé (all, the whole of)

Series a go's Person/class		MR	Phonemic Forms "alone"	"all, the whole of"
Is	ndi-	18, 1	ndóga/ndéga	ndósé/ndésé
Ip	ti-	18, 1	tóga/téga	tósé/tésé
IIs	u-	18,10,10A	wóga/óga/wéga	wósé/ósé/wésé
IIp	mu-	18, 1	móga/méga	mósé/mésé
1	u-	18,10,10A	wóga/óga/wéga	wósé/ósé/wésé
2	va-	18, 1	vóga/véga	vósé/vésé
3	u-	18,10,10A	wóga/óga/wéga	wósé/wésé
4	i-	18,10,	yóga/yéga	yósé/yésé
5	ri-	18, 1	róga/rega	rósé/résé
6	a-	18,10,10A	wóga/óga/éga	wósé/ósé/ósé
7	ci-	18, 1	cóga/céga	cósé/césé
8	zvi-	18, 1	zvóga/zvéga	zvósé/zvésé
9	i-	18,10	yóga/yéga	yósé/yésé
10	dzi-	18, 1	dzóga/dzéga	dzósé/dzésé
11	ru-	18, 2	rwóga/rwéga	rwósé/rwésé
12	ka-	18, 1	kóga/kéga	kósé/késé
13	tu-	18, 2	twóga/twéga	twósé/twésé
14	hu-	18, 2	hwóga/hwéga	hwósé/hwésé
15	ku-	18, 3	kwóga/kóga/kwéga	kwósé/kósé/kwésé
16	pa-	18, 1	póga/péga	pósé/pésé
17	ku-	18, 3	kwóga/kóga/kwéga	kwósé/kósé/kwésé
18	mu-	18, 1	móga/méga	mósé/mésé

4.1.8. Particles

There are four classes of particles, these syntactic classes being characterised by their morphological simplicity.

4.1.8.1. Ideophones

Of the four particles, ideophones are by far the greatest number.[1] As a syntactic class they are characterised by some sub-

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1 If Zulu is any guide, Doke and Vilakazi list approximately 2,600 ideophones in their Zulu-English Dictionary. Many of these are analogically related to one another, but those listed are certainly not all the ideophones in Zulu. A good number of ideophones are listed in the Standard Shona Dictionary by M. Hannan.

morphemic "morphology" and phonological features which are somewhat peripheral to the phonological system of the rest of the language.[1]

kodzvo	(of drooping the head; falling)
vhai	(of the boiling of water)
váí	(of the flash of lightning)
pfazu	(of dying)
sùrúdú	(of hanging head downwards for a while and then falling)
mbú[2]	(of being white)
mbúre[2]	(of being very white)
mbúretetu[2]	(of being extremely white)
mbúretetete[2]	(of being absolutely white)
rrrr[3] (rising glide)	(of being alone)
rrrr[3] (falling glide)	(of being in line)

4.1.8.2. Adverbs

Adverbs are a closed syntactic class of forms, some of which are derived.

céte	(only)
bédzi	(only)
gasho	(completely)
cinyararire	(quietly, secretly, silently)
ɔ́kwadí	(truly)
kwázvo	(very much)
zvíno	(now)
zvakánáka	(well)

4.1.8.3. Conjunctions

These also constitute a closed class.

así	(but)
kana	(if, when)
nyambá	(and yet)
cero	(provided that)
kunyange	(although, even though)
nokúti	(because)

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1 Some of this is described in Professor S. Fortune's Ideophones in Shona, pages 28 to 34.

2 From Ideophones in Shona, page 20.

3 Idem., page 32.

4.1.8.4. Interjections

There are a number of interjections, of which the following are some examples:-

kwéte	(no)
hóngu	(yes)
bho	(no)
heé	(yes)
áiwa	(no)
ʔmʔm	(no)
hókoyo	(beware)
máiwéé	(expression of pain or sorrow)
makórókóto	(congratulations!)
tokó waro	(serves you right)
yówé	(expression of regret, pain, commiseration)

4.2. PHRASES

Phrases are constructions whose constituents are stems (phonologically bound forms), words, and certain inflected phrases, and which occur as constituents in constructions at the inflected phrase and clause levels. The constructions here identified as phrases (substantival and verb phrases in particular) are characterised by considerable internal complexity. More work is needed on this and only an outline can be given at this stage.

4.2.1. Substantive Phrase

These are constructions whose slots are a nucleus and any number of qualifiers.

$$+ \text{NUC} \quad \pm \text{QUAL} \quad \pm \text{QUAL} \quad \pm \text{QUAL}_n$$

The qualifier constituents within a substantive phrase all show concordial agreement with the nucleus. The above constructional formula does not indicate the restrictions that apply to the ordering of qualifiers of different types. This needs particular investigation as well as the ordering of

adjectives if more than one occurs.

The nucleus slot may be filled by any of the following:-

noun	quantitative
adjective	possessive phrase
enumerative	associative phrase relative
demonstrative	infinitive verbal phrase
selector	relative verbal phrases of all
pronoun	tenses.

The qualifier slots have as fillers the following constituents:-

adjective	quantitative
enumerative	possessive phrase
demonstrative	associative phrase relative
selector	relative verbal phrases of all
	tenses.

Possessive, associative, infinitive, and relative verbal phrases are downgraded from upper levels.

In the examples of substantive phrases given below the constituents of each phrase are indicated as follows:-

n	noun	q	quantitative
a	adjective	PP	possessive phrase
e	enumerative	HP	associative phrase
d	demonstrative	InfP	infinitive phrase
s	selector	RP	relative phrase
p	pronoun		

mukómaná uyo mumwe mukúrú (that other big boy)
n d e a

mukómaná mumwe uyo mukúrú (that other big boy)
n e d a

mukómaná mukúrú mumwe uyo (that other big boy)
n a e d

cimwe cikúrú cáké (one of his big ones)
e a PP

cimwe cáké cikúrú (one of his big ones)
e PP a

ívo vanóténgéséá húní (those who sell firewood)
p (RP)

kudyá kwakánáka kwázvo (very nice food)
InfP (RP)

mwaná wandínódá kwázvo (the child whom I like very much)
n (PP)

imbwá yémurúmé uyo (the dog of that man)
n (PP)

vakómaná vósé vapfúpi (all the short boys)
n q a

vakómaná vapfúpi vósé (all the short boys)
n a q

vósé vapfúpi (all the short ones)
q a

vapfúpi vósé (all the short ones)
a q

úno wandínodá kwázvo (this one, whom I like most)
e (PP)

uyo wandínodá kwázvo (that one whom I like most)
d (PP)

mukómaná mumwé úno (the same boy right here)
n e e

munhu wandínozívá zvakánáka anémbwa mbirí
n (PP) (HP)
the person whom I know very well and who has two dogs)

munhu anémbwa mbirí wandínozívá zvakánáka
n (HP) (PP)
the person who has two dogs and whom I know very well)

Any qualifier constituents occurring after phrase-type qualifiers are interpreted as substantive phrases in apposition to the first.

anémbwa mbirí uyu (this one who has two dogs)
(HP) d
(SP) (SP)

of, uyu anémbwa mbirí (this one who has two dogs)
d (HP)
(SP)

yémurúmé mukúrú iyi (something (indicated) for an elder person)
(PP) d
(SP) (SP)

of, iyi yémurúmé mukúrú (this one of an elder person)
d (PP)
(SP)

4.2.2. Verb Phrase

A verb phrase is a construction whose constituents are an object gender concord of series b, a verb root, verbal extensions, object substantive phrases, and an adverbial.

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1 Verb phrases show much internal complexity and need considerable further work. This is no more than an outline which sufficiently characterises verb phrases for the purposes of this description. Notice that this constituency interpretation conforms to the traditional (and the transformational) view that sentences are composed of a subject and a predicate, the latter being verb and objects. A tagmemic interpretation would probably be that a sentence has subject, verb, and objects as constituents on a par. The nature of the sentence constituent structure tree is disputed at this point.

± G:go h + NUC:verb root ± EXT(S) ± OBJ:sp ± OBJ:sp

± OBJ:sp ± ADV: {adverb / Adverbial Phrase}

It should be noted that the first three constituents are phonologically bound forms. A verb phrase can never occur in isolation but is always a constituent in an inflected verbal phrase construction (see § 4.3.8. below). The internal structure of a verb phrase is dependent on the transitivity properties of the verb root and the extensions present.[1]

Such forms as /mangwáné/ (tomorrow) and /mangwánani ósé/ (every morning) appear to fill object slots, as do locative nouns and locative phrases. In the examples illustrating verb phrases below the verb phrase is underlined and the constituents indicated.

ndinópé mwaná sádza mangwánani ósé
R SP SP SP
(I give the child sadza every morning)

vágúsa byuñzi mwaná
R SP SP
(They cut the child's hair)

vácaóná hóva zhínjí munyika
R SP SP
(They will see many rivers in the country.)

ákaúyá nezúro
R adv.
(He came yesterday.)

ákaúyá
R
(He came.)

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1 The extensions are not treated in this analysis, but see Fortune's An Analytical Grammar of Shona, Chapter VII, for description and illustration of these.

tinóɗá sádza rakánáka céte
R SP adv.
(We only like nice sadza.)

4.2.3. Ideophone Phrase

Ideophone phrases are constructions whose constituents are all ideophones. These are usually repeated forms. Ideophone phrases must be distinguished from ideophones involving duplication or triplication. As this description is in terms of maximal constructions with optionally filled slots, a single ideophone is also interpreted as the manifestation of an ideophone phrase.

ké ké ké	(of women laughing)
washu washu	(of a lion walking)
cf. washuwashu	(of a person moving away gently)
ro ro ro	(of things falling into a container in groups or small quantities)
cf. rororo	(of the entering of cattle)

4.3. INFLECTED PHRASES

Inflected phrases are constructions whose constituents are phonologically bound morphemes and inflected phrases or *phrases*,[1] *and which occur* as constituents in clauses, inflected phrases, and phrases. Locative, adverbial, possessive, copulative, "ownership", presentative, and associative inflected phrases have a substantive phrase as nucleus. Verbal phrases have a verb phrase as nucleus.

4.3.1. Locative Phrase

A locative phrase is a construction whose constituents are one of the locative morphemes {pa-}, {ku-}, or {mu-}(which are gender concords of classes 16, 17, and 18 respectively), and

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[1] Notice the recursion involved here.

a substantive phrase. The substantive phrase constituent of a locative phrase can only have a noun other than of classes 1a, 2a, or 2b, an adjective, or an infinitive verbal phrase as nucleus.

Locative phrases must be distinguished from substantive phrases in which the nucleus is in classes 16, 17, or 18. In a substantive phrase with nucleus in these classes the concordial agreement of the qualifiers is 16, 17, or 18. But in a locative phrase the qualifiers of the substantive phrase show agreement with the nucleus of the substantive phrase and not with {pa-}, {ku-}, or {mu-}.

Summary: + LOC:$\begin{Bmatrix} \text{pa-} \\ \text{ku-} \\ \text{mu-} \end{Bmatrix}$ + NUC:sp

The locative morphemes are subject to MR's 9 and 17.

pamushá mukúrú wáké (at his big village)
(SP)
(LP)

cf. pamushá pakúrú páké (at his big village and its surroundings)
(SP)

pamudíki uyu (at the place where this small one is)
(SP)
(LP)

cf. pamudíki apa (here at the small one)
(SP)

pakudyá sádza (at the time for eating sadza)
(SP)
(LP)

mukuenda kumushá (while going home)
(SP)
(LP)

mumbá yángu (in my house)
(SP)
(LP)

4.3.2. Adverbial Phrase

An adverbial phrase is a construction whose constituents are one of the adverbial morphemes {na-} (with, by means of, and) or {sa-} (like), and a nucleus. The nucleus may be a substantive phrase, a locative phrase, or an "ownership" phrase.

Summary: + ADV: {na-} / {sa-} + NUC: {substantive phrase / locative phrase / "ownership" phrase}

When a substantive phrase is nucleus it can itself have as nucleus a noun, adjective, enumerative, demonstrative, selector, pronoun, infinitive verbal phrase, relative phrase, or a possessive phrase.

Several examples are given above illustrating the morphophonemic rules relating to the adverbial morphemes (MR's 22 to 25, and 28.1) and the nucleus (MR 21).

Substantive Phrase Nucleus

{na-}ishé uyu (1a noun as nucleus of SP)

MR 25

nashé uyu (with this chief)

(SP / AP)

{sa-}vámámbo ava (2a noun as nucleus of SP)

MR 25

savámámbo ava (like these chiefs)

(SP / AP)

{na-}amái vóga (2b noun as nucleus of SP)

MR 25

naamái vóga (with mother only)

{sa-}sadza rángu (5 noun as nucleus of SP)

MR 22,25 21

sesádza rángu (like my sadza)

{na-}vashoma vakúrú (adj. as SP nucleus)

MR 22,23 21

naváshoma vakú-á (with a few big ones)

(SP)

(AP)

{sa-}mamwe madíki (enum. as SP nucleus)

MR 22,23 21

semámwe madíki (like the other small ones)

(SP)

(AP)

{na-}urwu rwáké (dem. as SP nucleus)

MR 22,23 21

noúrwu rwáké (with this one of his)

(SP)

(AP)

{na-}cíyé cimwé (selector as SP nucleus)

MR 22,23

necíyé cimwé (by means of that same one)

{na-}iní mukúrú (Pronoun as SP nucleus)

MR 25,28

není mukúrú (with me the big one)

(SP)

(AP)

{sa-}isú vakúrú tóga (pronoun as SP nucleus)

MR 25,28

sesú vakúrú tóga (like us old people only)

(SP)

(AP)

{na-}ívo vósé (pronoun as SP nucleus)

MR 25 21

navó vósé (with them all)

(SP)

(AP)

{sa-}kucera gombá (inf. phrase as nucleus)

MR 22,23 21

sekúcera gombá (like digging a hole)

(SP)

(AP)

{na-}kutémá mutí (inf. phrase as nucleus)

MR 22,23

nókutémá mutí (by cutting the tree)

(SP)

(AP)

{na-}anoshándá Haráre (rel. phrase as nucleus)

MR 24

néanoshándá Haráre (with him who works in Salisbury)

(SP)

(AP)

{sa-}vaivhímá musángó (rel. phrase as nucleus)

MR 24

sévaivhímá musángó (like those who used to hunt in the veld)

(SP)

(AP)

{na-}dzeshé uyu (poss. phrase as nucleus)

MR 24

nédzeshé uyu (and those of this chief)

(SP)

(PP)

(AP)

{sa-}dzevánhu védú (poss. phrase as nucleus)

MR 24

sédzevánhu védú (like those of our people)

(SP)

(PP)

(AP)

{sa-}zveávo vadíki (poss. phrase as nucleus)
MR 24
sázveávo vadíki (like those of those small ones)
(SP)
(PP)
(AP)

{na-}dzángu mukúrú (poss. phrase as nucleus)
MR 24 19
nédzangú mukúrú (and those of me the senior)
(SP)
(PP)
(AP)

Locative Phrase as Nucleus

{na-}kumushá úye
MR 22,23 21
nekúmushá úye (through that village)
(SP)
(LP)
(AP)

{na-}mumushá wángu
MR 22,23 21
nemúmushá wángu (through the middle of my village)
(SP)
(LP)
(AP)

"Ownership" Phrase as Nucleus

{na-}sáwaci iyi
MR 25
nasáwaci iyi (and the owner of this watch)
(SP)
(OP)
(AP)

cf. sáwaci iyi (the owner of this watch)

{na-}nyamukádzí wáké

MR 25

nanyamukʼizí wáké (with that fellow and his wife)

(SP)
(OP)
(AP)

cf. nyamukádzí wáké (that fellow and his wife)
cf. mukádzí wáké (his wife)

{sa-}muzvínáhwahwá uhwu

MR 22,23

sémuzvínáhwahwá uhwu (like the owner of this beer)

(SP)
(OP)
(AP)

cf. muzvínáhwahwá uhwu (the owner of this beer)
cf. hwahwá uhwu (*this beer*)

4.3.3. Possessive Phrase

A possessive phrase is a construction whose constituents are a gender concord of series a, the possessive morpheme {-a-}, and a nucleus. The nucleus may be a substantive phrase, a locative phrase, an "ownership" phrase, or a participial verbal phrase.

Summary: + Gender a + POSS:{-a-} + NUC: { substantive phrase / locative phrase / "ownership" phrase / participial phrase }

The nucleus of the substantive phrase constituent may be a noun, adjective, enumerative, demonstrative, selector, pronoun, *infinitive* verbal *phrase*, relative phrase (associative or verbal), or a possessive phrase.

Substantive Phrase as Nucleus

dare {ri-a-}mambo mukúrú (1a noun as SP nucleus)

MR 1 26 21

dare ámámbo mukúrú (the court of the senior chief)

(SP)

(PP)

(SP)

matare {a-a-}vámámbo ava (2a noun as SP nucleus)

MR 10 25

matare avámámbo ava (the courts of these chiefs)

(SP)

(PP)

(SP)

durí {ri-a-}ambúya váye (2b noun as SP nucleus)

MR 1 25

durí ráambúya váye (the mortar of that grandmother)

(SP)

(PP)

(SP)

manyérényété {a-a-}hárí (9 noun as SP nucleus)

MR 10 22 21
23

manyérényété éharí (the patterns of the pot)

(SP)

(PP)

(SP)

cf. hárí (the pot)

dzimbá {dzi-a-}vanhu védú (2 noun as SP nucleus)

MR 1 22 21
23

dzimbá dzevánhu védú (the houses of our people)

(SP)
(PP)
(SP)

cf. vanhu védú (our people)

mwaná {u-a-}mukúrú úye (adj. as SP nucleus)

MR 10 22
23

mwaná wómukúrú úye (the child of that big one)

(SP)
(PP)
(SP)

mwené {u-a-}mamwe óga (enum. as SP nucleus)

MR 10 22 21
23

mwené wa-ámwe óga (the owner of the other ones only)

(SP)
(PP)
(SP)

mabhúku {a-a-}avo vadíki (dem. as SP nucleus)

MR 10 22 21
23

mabhúku aávo vadíki (the books of those small ones)

(SP)
(PP)
(SP)

imbwá {i-a-}cípi cimwé (selector as SP nucleus)

MR 10 22
23

imbwá yecípi cimwé (the dog of which other one?)

(SP)
(PP)
(SP)

Pronouns of the 1st and 2nd persons and class 1 may be nucleus of a possessively inflected substantive phrase, but they are generally replaced by the corresponding replacement gender concords of series d. When a pronoun of 1st or 2nd person or class 1 is nucleus of the substantive phrase constituent the meaning is more emphatic than when the corresponding substitute morpheme is nucleus.

mombe {dzi-a-}ngu mukúrú (poss. substitute go as nucleus)
MR 1 26
mombe dzángu mukúrú (the cattle of me the senior one)
(SP)
(PP)
(SP)

mombe {dzi-a-}íní mukúrú (pronoun as nucleus)
MR 1 25
28
mombe dzení mukúrú (the cattle of me the senior one)
(SP)
(PP)
(SP)

cf. iní mukúrú (me the senior one)

mushá {u-a-}kó unódá mámbo (poss. substitute go as nucleus)
MR 10 26
mushá wákó unódá mámbo (the village of you who likes the chief)
(SP)
(PP)
(SP)

mushá {u-a-}iwé unódá mámbo (pronoun as nucleus)
MR 10 25
28
mushá wewé unódá mámbo (the village of you who likes the chief)
(SP)
(PP)
(SP)

cf. iwé unódá mámbo (you who likes the chief)

bhúku {ri-a-}ké anodzíídzá (pone, substitute go as nucleus)

MR 1 26

bhúku ráké anodzíídzá (the book of him who studies)

(SP)

(PP)

(SP)

bhúku {ri-a-}íye anodzíídzá (pronoun as nucleus)

MR 1 25

bhúku raíye anodzíídzá (the book of him who studies)

(SP)

(PP)

(SP)

cf. íye anodzíídzá (he who studies)

dangá {ri-a-}ídzo dzósé (pronoun as nucleus)

MR 1 25

dangá raídzo dzósé (the cattle kraal of them all)

(SP)

(PP)

(SP)

dangá {ri-a-}dzo dzósé (pronoun (without ri(-a-) as nucleus)

MR 1 25

dangá rádzo dzósé (the cattle kraal of them all)

(SP)

(PP)

(SP)

cf. ídzo dzósé (all of them)

démó {ri-a-}kutémá muti (infinitive phrase as nucleus)

MR 1 22
23

démó rékutémá muti (an axe to chop the tree with)

(SP)

(PP)

(SP)

cf. kutémá muti (to chop the tree)

mapadzá {a-a-}kucera gombá (infinitive phrase as nucleus)

MR 10 22 21
23

mapadzá okúcera gombá (hoes to dig the hole with)

(SP)
(PP)
(SP)

cf. kucera gombá (to dig the hole)

imbwá {dzi-a-}vanóvhímá musángó (relative verbal phrase as nucleus)

MR 1 24

imbwá dzévanóvhímá musángó (the dogs of them who hunt in the veld)

(SP)
(PP)
(SP)

cf. vanóvhímá musángó (they who hunt in the veld)

mwaná {u-a-}anéimbá húrú (relative associative phrase as nucleus)

MR 10 24

mwaná wéanéimbá húrú (the child of the one with a big house)

(SP)
(PP)
(SP)

cf. anéimbá húrú (the one who has a big house)

cinhu {ci-a-}wémba iyi (poss. phrase as nucleus)

MR 1 24

cinhu céwembá iyi (the thing of the one (e.g. owner) of this house)

(SP)
(PP)
(SP)

cf. imbá iyi (the one of this house)

{oi-a-}weíyo húrú (poss. phrase as nucleus)
MR 1 24
cóweíyo húrú (the one of the one of that big one)
(SP)
(PP)

cf. weíyo húrú (the one of that big one)

Locative Phrase as Nucleus

vaná {va-a-}kumushá úye
MR 1 22 21
23
vaná vekúmushá úye (the children of that village)
(LP)
(PP)
(SP)

cf. kumushá úye (to that village)

húkú {dzi-a-}mumushá wángu
MR 1 22 21
23
húkú dzemúmushá wángu (the fowls of my village)
(LP)
(PP)
(SP)

cf. mumushá wángu (in my village)

"Ownership" Phrase as Nucleus

imbwá {i-a-}sáwaci
MR 10 26
imbwá yásáwaci (the dog of the owner of the watch)
(OP)
(PP)
(SP)

cf. sáwaci (the owner of the watch)

imbá [i-a-]vazvínáhwahwá uhwu

MR 10 26

imbá yávazvínáhwahwá uhwu (the house of the owners of this bear)

(OP)

(PP)

(SP)

cf. vazvínáhwahwá uhwu (the owners of this bear)

vaná [va-a-]sányíka iyo

MR 1 26

vaná vásányíka iyo (the children of the one in charge of that country)

(OP)

(PP)

(SP)

cf. sányíka iyo (the one in charge of that country)

Participial Verb Phrase as Nucleus

mwaná [u-a-]ndínodá

MR 10 25

mwaná wandínodá (the child whom I like)

(Part.P)

(PP)

(SP)

mombe [dzi-a-]vákáúrayá

MR 1 25

mombe dzavákáúrayá (the cattle which they killed)

(Part.P)

(PP)

(SP)

vakádzí [va-a-]vácaróórá

MR 1 25

vakádzí vavácaróórá (the women whom they will marry)

(Part.P)

(PP)

(SP)

4.3.4. Copulative Phrase

A copulative phrase is a construction whose constituents are the copulative morpheme {cop} and a nucleus. The nucleus may be a substantive phrase, a locative phrase, or an "ownership" phrase.

Summary: + PREDICATOR: {cop} + NUC: { substantive phrase / locative phrase / "ownership" phrase }

The nucleus of the substantive phrase constituent may be a noun, adjective, enumerative, demonstrative, selector, pronoun, infinitive verbal phrase, relative phrase (associative and verbal), or a possessive phrase.

For the morphophonemics of the copulative morpheme see MR 27, page 126.

Substantive Phrase as Nucleus

{cop}ishé uyu (1a noun as SP nucleus)
MR 27 21
ndhíshe uyu (it is this chief)
(SP)
(CP)

{cop}vábabá vakúrú (2a noun as SP nucleus)
MR 27
ndhavábabá vakúrú (it is the elder fathers)
(SP)
(CP)

{cop}amái vóga (2b noun as SP nucleus)
MR 27
ndhaamái vóga (it is mother only)
(SP)
(CP)

cf. amái vóga (mother only)

[cop]mvúrá iyo (9 noun as SP nucleus)

MR 27 21
imvura iyo (it is that water)
(SP)
(CP)

[cop]gúrú ráŋgu (5 adj. as SP nucleus)

MR 27 21
iguru ráŋgu (it is my big one)
(SP)
(CP)

[cop]mwaná wáŋgu (1 noun as SP nucleus)

MR 27 18
20A
mwána wáŋgu (it is my child)

[cop]mazwí ávó (6 noun as SP nucleus)

MR 27 18 21
mázwí ávó (it is their words)

[cop]cimwe cikúrú (enum. as SP nucleus)

MR 27 18 21
cimwé cikúrú (it is another big one)

[cop]ici cimwé (dem. as SP nucleus)

MR 27 21
ndheici cimwé (it is this one only)

[cop]váńó vadíki (selector as SP nucleus)

MR 27
ndhevánó vadíki (it is these small ones)

[cop]isú vakúrú tóga (pronoun as SP nucleus)

MR 27 16
ndhisú vakúrú tóga (it is us old people only)

[cop]imí mósé (pronoun as SP nucleus)

MR 27 16
ndhimí mósé (it is all of you)

{cop}íco céké (pronoun as SP nucleus)

MR 27

ndhíco céké (it is his)

{cop}kudyá kwakánáka (infinitive phrase as nucleus)

MR 27 18 21

kúdya kwakánáka (it is good food)

cf. kudyá kwakánáka (good food)

{cop}akáténgesa mombe (relative verbal phrase as nucleus)

MR 27

ndhéakáténgesa mombe (it is he who sold the cattle)

(SP)

(CP)

{cop}anéimbá húrú (relative associative phrase as nucleus)

MR 27

ndhéanéimbá húrú (it is the one who has a big house)

(SP)

(CP)

{cop}avámámbo ava (poss. phrase as nucleus)

MR 27

ndhéavámámbo ava (it is those of these chiefs)

(SP)

(CP)

{cop}dzevánhu védú (poss. phrase as nucleus)

MR 27

ndhédzevánhu védú (it is those of our people)

cf. dzevánhu védú (those of our people)

vanhu védú (our people)

{cop}zveávo vadíki (poss. phrase as nucleus)

MR 27

ndhézveávo vadíki (it is those of those small ones)

{cop}dzángu mukúrú (poss. phrase as nucleus)

MR 27 19

ndhédzangú mukúrú (it is those of me the senior one)

Locative Phrase as Nucleus

{cop}pamushá wáké mukúrú
27
ndhépamushá wáké mukúrú } (it is his headquarters)
pámushá wáké mukúrú }
cf. pamushá wáké mukúrú (at his big village)

"Ownership" Phrase as Nucleus

{cop}sáwaci iyi
MR 27
ndhisáwaci iyi (it is the owner of this watch)
(OP)
(CP)

{cop}nyabhúku iri
MR 27
ndhínyabhúku iri (it is the owner of this book)
(OP)
(CP)

{cop}vazvínáhwahwá úhwu
MR 27 21
vázvinahwahwá úhwu (they are the owners of this bear)

4.3.5. "Ownership" Phrase

An "ownership" phrase is a constructions whose constituents are one of the "ownership" forms {sá-},[1] {nya-}, {mu-zvi-na-}, or {va-zvi-na-}, and a substantive phrase.

Summary: + OWN: {sá-} / {nya-} / {mu-zvi-na-} / {va-zvi-na-} + NUC: substantive phrase

[1] This form should not be confused with the adverbial {sa-} (like).

There are severe restrictions on the substantive phrase constituent. It appears that only nouns other than of classes 1a, 2a, 2b, and infinitive verbal phrases may be nucleus. No examples have been found with more than one qualifier in the substantive phrase, and often there are none. It would seem therefore that the "ownership" inflecting morphemes are mainly noun formatives but have a limited function as substantive phrase inflectors.

{sá-}wáci iyi
MR 21
sáwaci iyi (the owner of this watch)
(SP)
(OP)

{sá-}imbá yáké
M sáimbá yáké (a married person)
cf. imbá yáké (his house)
(SP)

{sá-}nyika iyo
MR 21
sányika iyo (the owner of that land)
(SP)
(OP)
cf. nyika iyo (that land)

{nya-}mukádzí wáké
nyamukádzí wáké (he and his (noted) wife)
(SP)
(OP)
cf. mukádzí wáké (his wife)

{nya-}bhúku iri
nyabhúku iri (the owner of this book)
(SP)
(OP)
cf. bhúku iri (this book)

{nya-}kubá zvavámwe
nyakubá zvavámwe (the thief of other people's things)
(Inf.P)
(OP)

{nya-}kubvuta zvémwaná
nyakubvuta zvémwaná (one who grabs the children's things)
(Inf.P)
(OP)

{nya-}kuwana mukádzí
nyakuwana mukádzí (one who has recently married)

cf. kuwana mukádzí (to find a wife; marry)

{mu-zvi-na-}mhósva {the accused in a repeated case}
muzvínámhósva

{mu-zvi-na-}imbá húrú
muzvínáimbá húrú (the owner of the big house)
(SP)
(OP)

{mu-zvi-na-}guhwa
MR 21
muzvínáguhwa (a noted liar)

cf. guhwa (a lie)

{va-zvi-na-}bhóra
vazvínábhóra (football players)

cf. bhóra (football)

4.3.6. Presentative Phrase

Demonstratives and selectors may be inflected by the presentative morpheme {há-}. Such forms are usually followed by a noun with which the demonstrative or selector shows concordial agreement, but the inflected demonstrative or

selector may be followed by a qualificative. The latter case is interpreted as involving inflection of a substantive phrase. The former could be interpreted as inflection of a substantive phrase with empty qualificative slots, or as a construction at a new level, viz. inflected word, in which the constituents are a bound morpheme and a word (demonstrative or selector). A noun following a presentative inflected demonstrative or selector is here interpreted as being the nucleus constituent of a distinct substantive phrase, the latter being the subject of a clause with presentative phrase as predicative.[1] This same interpretation could be given to qualificatives following a presentative inflected demonstrative or selector. Very few examples were elicited of presentative inflected substantive phrases with nouns as nucleus, but these were felt by my informant to be contracted forms.

Summary: + PRES: {há-} + NUC: substantive phrase with demonstrative or selector as nucleus.

There is vowel coalescence between {há-} and demonstratives (by MR 28, page 129), but {há-} shows regressive vowel assimilation to the gender concord vowel of selectors (by MR 22, page 109). {há-} is also subject to MR 26A, page 122.

{há-}avo vanhu váye (dem. as nucleus)

MR 26A
28

hávo vanhu váye (There are those people.)

{há-}uyo mukómaná árí kuúyá (dem. as nucleus)

MR 26A
8

hóyo mukómaná árí kuúyá (There is the boy coming.)

{há-}ici cigaro cákó (dem. as nucleus)

MR 26A
28

héci cigaro cákó (Here is your chair.)

---

[1] This analysis was suggested by Professor D.T. Cole.

{há-}ázíno dzákó (selector as nucleus)

MR 26A
22

hédzíno dzákó (Here are yours.)
(SP)
(Pres.P)

{há-}hwúye hwángu (selector as nucleus)

MR 26A
22

hóhwúye hwéngu (There is mine.)
(SP)
(Pres. P)

{há-}váye vadíki (selector as nucleus)

MR 26A
22

háváye vadíki (There are the small ones.)
(SP)
(Pres.P)

{há-}hwúno hwahwá hwakánáka (selector as nucleus)

MR 26A
22

hóhwúno hwahwá hwakánáka (Here is the good beer.)
(Pres.P) (SP)

{há-}vanhu váye (noun as nucleus)

MR 26A
22

hávanhu váye (There are those people.)
(SP)
(Pres.P)

From: hávo vanhu váye (There are those people.)
(SP)
(Pres.P)

4.3.7. Associative Phrase

There are two types of associative phrase, positive and negative, and their structure is different.

4.3.7.1. Positive

A positive associative phrase has a gender concord of series b and an adverbial phrase as constituents. There are predicative and relative (qualificative) types. The relative type includes the nominalising [rel] morpheme. The predicative type is either principal (non-subordinate predicate) or participial (subordinate predicate). These have the same morphemic structure but the gender concord is subject to slightly different morphophonemic rules. In the principal forms the I, II gender concords are L by MR 17(c) (page 80) and III gender concords are H by MR 19(b) (page 85). In the participial forms all gender concords are H by MR 19(d) (page 85). The [rel] morpheme is subject to MR 45 (page 145) for its phonemic realisation, and the gender concord in relative forms to MR 18(b) (page 83).

Summary:

Predicative type (princ. and part.): + G:go b + NUC:adverbial phrase

Relative (qualificative) type: + NOM:[rel] + G:go b + NUC: adv. phrase

Series b Gender Concords

Is	ndi-	8	vi-
Ip	ti-	9	i-
IIs	u-	10	dzi-
IIp	mu-	11	ru-
1	a-	12	ka-
2	va-	13	tu-
3	u-	14	hu-
4	i-	15	ku-
5	ri-	16	pa-
6	a-	17	ku-
7	ci-	18	mu-

{va-}([na-mvúrá][1] iyo (principal)

MR 19 22
23

vánemvúrá iyo (They have that water.)
(AP)
(Assoc.P)

{ti-}nékudyá kwakánáka (principal)

MR 17

tinékudyá kwakánáka (We have nice food.)
(AP)
(Assoc.F)

kana {ku-}naívo vóga (participial)

MR 19

kana kúnaívo vóga (if they are the only ones there)
(AP)
(Assoc.P)

kana {ndi-}neúnó mudíki (participial)

MR 19

kana ndíneúnó mudíki (if I have this small one)
(AP)
(Assoc.P)

{rel-ku-}naamái vóga (relative)

MR 45 18

kunaamái vóga (to mother alone)
(AP)
(Assoc.P)

{rel-va-}némvura iyo (relative)

MR 45 18

vanémvura iyo (they who have that water)
(AP)
(Assoc.P)

---

[1] Notice that the inflected nucleus tone rule (MR 21) does not apply in this case.

4.3.7.2. Negative

A negative associative phrase has a negative morpheme, a gender concord of series b, the adverbial morpheme {-na }, and a nucleus as constituents. The nucleus may be a substantive phrase or an "ownership" phrase. There are predicative and relative types of negative associative phrases. The relative type includes the nominalising morpheme {rel}. The predicative type is either principal (non-subordinate predicate) or participial (subordinate predicate), and different negative morphemes occur in both.

Principal: + NEG:{ha_n-} + G:gc b

Participial: + G:gc b + NEG:{-si-}

} + ADV:{na} + NUC:SP

Relative: + NOM:{rel} + G:gc b + NEG:{-si-}

The gender concord tone in the principal is determined by MR 19(c) (page 85), in the participial by MR 19(d) (page 85), and in the relative by MR 18(b) (page 83). The phonemic realisation of {rel} is determined by MR 45 (page 145). The negative morpheme {ha_n-} has invariant realisation (see § 3.4.1., page 131), and {-si-} shows progressive tonal dissimilation in accordance with MR 32 (page 134).

{ha_n-va-}ná mvúrá íyo (principal)

MR 19

haváná mvúrá íyo (They don't have that water.)

(SP)

(Assoc.P)

{ha_n-ku-}ná dzáishé uyu (principal)

MR 19

hakúná dzáishé uyu (Those belonging to this chief are not there.)

(SP)

(Assoc.P)

{ha$_n$-ti-}ná oikúrú oáké (principal)
MR 19
hatíná cikúrú oáké (We don't have his big one.)
(SP)
(Assoc.P)

kana {ku-si-}ná amái vóga (participial)
MR 19 32
kana kúsiná amái vóga (if mother alone isn't there)
(SP)
(Assoc.P)

kana {ti-si-}ná cikúrú oáké (participial)
MR 19 32
kana tísiná cikúrú oáké (if we don't have his big one)
(SP)
(Assoc.P)

{rel-ti-si-}ná kudyá (relative)
MR 45 18 32
tisíná kudyá (we who don't have food)
(SP)
(Assoc.P)

{rel-ku-si-}ná amái vóga (relative)
MR 45 18 32
kusíná amái vóga (the place where mother alone isn't)
(SP)
(Assoc.P)

{rel-ti-si-}ná cíyé cikúrú (relative)
MR 45 18 32
tisíná cíyé cikúrú (we who do not have that big one)
(SP)
(Assoc.P)

4.3.8. Verbal Phrase

A verbal phrase is a construction whose constituents are one or more phonologically bound morphemes and a verb phrase.[1] The affixal morphemes are in all but one case discontinuous, that is, some of the morphemes are prefixal to the nucleus of the verb phrase (the nucleus always being a verb root, § 4.3.2., page 169 above), and one is suffixal. The usual form of this construction is:-

$$[a\text{-}(\text{-}b\text{-})(\text{-}c\text{-}) \ldots . \text{-}d] + \text{-R-} \pm \text{SP} \pm \text{AP}$$
$$(\text{Verb Phrase})$$

where a, b, and c represent prefixal morphemes and d a suffixal morpheme in relation to the root of the verb phrase. One of the prefixal morphemes is a gender concord of series b, and thus shows concordial agreement with the nucleus of the subject substantive phrase. The other prefixal morphemes denote, inter alia, tense, negation, and subordination of relative,[2] participial, or consecutive type. These morphemes occur in various combinations in a rather complex fashion, and the whole conjugational system can be portrayed by means of a flow-chart such as has been done for Manyika by Stevick.[3]

The tonal patterns occurring on the root-(extension(s))-final suffix of the verbal form varies considerably from one conjugational form to another, and high and low verb roots generally have distinctive tonal patterns. These tonal patterns ...

---

1 Dr H.A. Gleason first suggested segmenting the traditional "verbs" between the conjugational affixes and the root when I was working on Zulu syntax. This treatment conforms in principle to the transformationalist phrase *structure* (and hence universal?) rules for English: VP → Tense(modal) VP.

2 The relative (nominalising)morpheme is realised as a L tone on the subject gender concord (MR 45), or on the past tense morpheme {-a-} (MR 208).

3 Earl W. Stevick, "Inflection of the Manyika Verb," NADA, No. 36, 1959. This is a very useful means of portraying the various choices possible in the conjugational system and is a succint means of portraying *morpheme* tactics. Such a chart is, however, devised without reference to constituency *relationships* of the morphemes involved and is therefore syntactically unmotivated.

are interpreted as realisations of tonal morphemes (see § 3.4.3. above for discussion and illustration). Inflection of a verb phrase therefore includes both segmental and tonal conjugational morphemes.

There are ten tone conjugational morphemes, some of which occur with high roots, some with low roots, and a few with both high and low roots. These tonal morphemes are paired in various combinations (one such morpheme being for high roots and one for low roots), and every conjugational inflection of verb phrases includes one of these pairs. The particular tonal morpheme pair which occurs is dependent on the tense morpheme(s) in the verbal form, whether a negative morpheme occurs or not, whether an object gender concord occurs in the verb phrase, and whether the verbal form is principal or subordinate. The various pairs of tonal morphemes are indicated below, together with an indication of the MR applying to each morpheme and the resultant tone profile or pattern for each morpheme. Each pair of tonal morphemes is numbered (I to X), the numbers corresponding to those used by Fortune for his "tone conjugations."

Verb phrase inflections are of several types insofar as the syntactic possibilities of the verbal phrase are concerned. The following are the main types:-

(a)	imperative:	Fills interjective slots.
(b)	infinitive:	Fills nuclear slots in substantive phrases.
(c)	principal: (various tenses)	Fills non-subordinate predicative slots.
(d)	participial: (various tenses)	Fills subordinate predicative slots.
(e)	relative: (various tenses)	Fills nuclear and qualificative slots in substantive phrases.
(f)	subjunctive:	Fills subordinate predicative slots.
(g)	consecutive:	Fills subordinate predicative slots.

While the most important conjugational forms are described below, the coverage of Zezuru verbal forms given here is by no means exhaustive. Several conjugational morphemes are not treated at all, and compound verbal forms are also omitted. Object gender concords occasion characteristic tone conjugation morphemes in the inflecting constituent, but forms with object concords are not described here. Conjugational inflections are extremely complex and require a far more thorough investigation than can be provided in this dissertation.

Configurational Tonal Morpheme Pairs (TMP's)[1]

TMP I

	$\{TM_A{}^h\}$	$\{TM_E{}^b\}$
MR	35	39
	H	L
	HH	LL
	HHH	LLL
	HHHL	LLLL

TMP II

	$\{TM_A{}^h\}$	$\{TM_J{}^w\}$
MR	35	44
	H	H
	HR	LR
	HRH	LRH
	HRHL	LLHR

TMP III

	$\{TM_A{}^h\}$	$\{TM_P{}^w\}$
MR	35	40
	H	H
	HR	HH
	HRH	HRL
	HRHL	HRLL

TMP IV

	$\{TM_D{}^b\}$	$\{TM_D{}^b\}$
MR	38	38
	H	H
	HL	HL
	HLL	HLL
	HLLL	HLLL

TMP V

	$\{TM_B{}^h\}$	$\{TM_H{}^w\}$
MR	36	42
	L	L
	HL	LH
	HLH	LHL
	HHLH	LHLL

TMP Va

	$\{TM_C{}^h\}$	$\{TM_I{}^w\}$
MR	37	43
	H	H
	HL	LH
	HLH	LHL
	HHLH	LHLL

TMP VI

	$\{TM_E{}^b\}$	$\{TM_D{}^b\}$
MR	39	38
	L	H
	LL	HL
	LLL	HLL
	LLLL	HLLL

TMP VII

	$\{TM_A{}^h\}$	$\{TM_H{}^w\}$
MR	35A	42
	L	L
	HH	LH
	HHH	LHL
	HHHL	LHLL

TMP VIII

	$\{TM_A{}^h\}$	$\{TM_D{}^b\}$
MR	35	38
	H	H
	HH	HL
	HHH	HLL
	HHHL	HLLL

TMP IX

	$\{TM_E{}^b\}$	$\{TM_E{}^b\}$
MR	39	39
	L	L
	LL	LL
	LLL	LLL
	LLLL	LLLL

TMP X

	$\{TM_A{}^h\}$	$\{TM_C{}^w\}$
MR	35	41
	H	H
	HH	HL
	HHH	HHL
	HHHL	HHLL

---

1 The tonal morpheme on the left in each pair occurs with high roots and that on the right occurs with low roots. The MR's applicable to the tonal morphemes (MR's 35 to 44) are given on pages 142 to 144 above.

Exemplification

As there is considerable allomorphic overlap between the various tonal morphemes, several examples must be provided to demonstrate the occurrence of a tonal morpheme. The same eight verb roots (or extended roots), four high and four low, will be used throughout in illustrating the various conjugational forms in order to permit easy comparison. As the same roots are used in all forms, individual glosses will not be given, but the gloss associated with a particular construction is indicated. The roots (or extended roots) used are given below in their infinitive forms.

High roots		Low roots	
kupá	(to give)	kubva	(to leave)
kuténgá	(to buy)	kubvunza	(to ask)
kuténgésá	(to sell)	kutarisa	(to look)
kutándánísa	(to chase)	kuregerera	(to forgive)

Series b Gender Concords

The subject concord constituent of a verbal phrase is one of the series b gender concords.

Is	ndi-	8	zvi-
Ip	ti-	9	i-
IIs	u-	10	dzi-
IIp	mu-	11	tu-
1	a-	12	ka-
2	va-	13	tu-
3	u-	14	hu-
4	i-	15	ku-
5	ri-	16	pa-
6	a-	17	ku-
7	ci-	18	mu-

4.3.8.1. Infinitive

Positive

MR 9 17: + G:{ku-}.... + T:{-a}[1] + TMP:I + NUC:VP 35,39

Gloss: "to ....."

$\{TM_A{}^h\}$	$\{TM_E{}^h\}$
kupá	kuba
kuténgá	kubvunza
kuténgésá	kutarisa
kutándánísa	kuregerera

Negative

MR 9 17: + G:{ku-} + NEG:{-sa-}.... + T:{-a} + TMP:I + NUC:VP 33 35,39

Gloss: "not to ...."

$\{TM_A{}^h\}$	$\{TM_E{}^h\}$
kusapá	kusabva
kusaténgá	kusabvunza
kusaténgésá	kusatarisa
kusatándánísa	kusaregerera

4.3.8.2. Imperative

MR 48: ± /1-/[2]... + T:{-a} + PL:{-yi} + TMP:II + NUC:VP 35,44

Gloss: command forms

$\{TM_A{}^h\}$	$\{TM_J{}^w\}$
ipá(yí)	ibvá(yí)
téngá(yí)	bvunzá(yí)
téngésá(yí)	tarísá(yí)
tándánísa(yí)	regerérá(yí)

[1] No suitable name for this terminal slot readily suggests itself. T may be taken as "terminal" or "tense" in this position.

[2] This form occurs by phonological requirements, viz. when the verb root does not contain a vowel.

4.3.8.3. Present Habitual

Positive

Principal: + G:gc b + T:[-no-].... + T:[-a] + TMP:I + NUC:VP
MR 9,12 17,19 30A 35,39

Gloss: "we/they ....." [1]

	$[TM_A^h]$	$[TM_E^b]$
1p subject	tinópá	tinóbva
	tinóténgá	tinóbvunza
	tinóténgésá	tinótarisa
	tinótándánísa	tinóregerera
cl.2 subject	vánopá	vánobva
	vánoténgá	vánobvunza
	vánoténgésá	vánotarisa
	vánotándánísa	vánoregerera

Relative: + NOM:[rel] + G:gc b + T:[-no-].... + T:[-a] + TMP:I + NUC:VP
MR 45 9,12 18 30A 35,39

Gloss: "we/they who ....."

	$[TM_A^h]$	$[TM_E^b]$
1p subject	tinópá	tinóbva
	tinóténgá	tinóbvunza
	tinóténgésá	tinótarisa
	tinótándánísa	tinóregerera
cl.2 subject	vanópá	vanóbva
	vanóténgá	vanóbvunza
	vanóténgésá	vanótarisa
	vanótándánísa	vanóregerera

[1] Examples with 1st person s... restricted to 1p throughout, viz. with subject gc [ti-] (w... samples with 3rd person subject are restricted to class 2 [va-] (they).

Negative

Principal: + NEG:{ha$_n$-} + G:gc b .... + T:{-a} + TMP:VII + NUC:VP
MR 9,12 19 35A,42

Gloss: "we do not ....."

	{TM$_A^h$}	{TM$_H^w$}
Ip [1]	hatípe	hatívve
	hatíténgé	hatítvunzé
	hatíténgésé	hatítarise
	hatítándánise	hatítregérere

Relative:

+NOM:{rel} +G:gc b +NEG:{-si-} +T:{-nga-}....+T:{-a} +TMP:Va +NUC:VP
MR 45 9,12 18 32 34B 37,43

Gloss: "... who do/may not ....." [2]

	{TM$_C^h$}	{TM$_I^w$}
cl.2 [3]	vasíngapé	vasíngabvé
	vasíngaténge	vasíngábvunzé
	vasíngaténgesé	vasíngátarise
	vasíngatándánisé	vasíngáregérere

Participial: +G:gc b +NEG:{-si-} +T:{-nga-}....+T:{-a} +TMP:V +NUC:VP
MR 19 32 34A 36,42

Gloss: "if we do/may/will not....." [4]

	{TM$_B^h$}	{TM$_H^w$}
Ip [5] (kana)	tísingápe	tísingábve
	tísingáténge	tísingábvunzé
	tísingáténgesé	tísingátarise
	tísingátándánisé	tísingáregérere

---

[1] Forms with gc III are in all respects the same as these but for the gc.

[2] The present habitual and potential negative relative forms are identical.

[3] Forms with gc I or II are in all respects the same as these but for the gc.

[4] The present habitual, potential, and future negative participial forms are identical.

[5] Forms with gc III are in all respects the same as these but for the gc.

4.3.8.4. Past Habitual

Positive

Principal: +G:gc b +T:{-a-} +T:{-i-}.... +T:{-a} +TMP:I +NUC:VP

MR 17,19
20B
1,2,3,10

31 35,39

Gloss: "we/they used to ....."

	$[TM_A{}^h]$	$[TM_B{}^h]$
Ip	taípá	taíbva
	taíténgá	taíbvunza
	taíténgésá	taítarisa
	taítándánísa	taíregerera
cl.2	váipá	váibva
	váiténgá	váibvunza
	váiténgésá	váitarisa
	váitándánísa	váiregerera

Relative: +NCd:{rel} +G:gc b +T:{-a-} +T:{-i-}....+T:{-a} +TMP:I +NUC:VP

MR 45 18,
20B
1,2,3,10

31 35,39

Gloss: "they who used to ....."

	$[TM_A{}^h]$	$[TM_B{}^h]$
cl.2[1]	vaípá	vaíbva
	vaíténgá	vaíbvunza
	vaíténgésá	vaítarisa
	vaítándánísa	vaíregerera

Participial: +G:gc b +T:{-a-} +T:{-i-}....+T:{-a} +TMP:I +NUC:VP

MR 19
20B
1,2,3,10

31 35,39

Gloss: "if we used to....."

Ip[2]	(kana)	táipá	táibva
		táiténgá	táibvunza
		táiténgésá	táitarisa
		táitándánísa	táiregerera

[1] Forms with gc I and II are tonally the same as these.

[2] Forms with gc III are tonally the same as these.

Negative

Principal:

+NEG:{ha$_n$-} +G:gc b +T:{-a-} +T:{-i-}....+T:{-a} +TMP:I +NUC:VP

MR 19 20B 1,2,3,10 31 35,39

Gloss: "we didn't used to....."

	{TM$_A$ h}	{TM$_B$ b}
Ip [1]	hatáipá	hatáibva
	hatáiténgá	hatáibvunza
	hatáiténgésá	hatáitarisa
	hatáitándánisa	hatáiregerera

Relative:

+NOM:{rel} +G:gc b +T:{-a-} +T:{-i-} +NEG:{-sa-}...+T:{a} +TMP:I +NUC:VP

MR 45 18 20B 1,2,3,10 31 33 35,39

Gloss: "they who didn't used to....."

cl,2 [2]	vaísapá	vaísabva
	vaísaténgá	vaísabvunza
	vaísaténgésá	vaísitarisa
	vaísatándánisa	vaísaregerera

Participial:

+G:gc b +T:{-a-} +T:{-i-} +NEG:{-sa-}...+T:{-a} +TMP:I +NUC:VP

19 20B 1,2,3,10 31 33 35,39

Gloss: "if we didn't used to....."

Ip [1] (kana)	táísapá	táísabva
	táísaténgá	táísabvunza
	táísaténgésá	táísatarisa
	táísatándánisa	táísaregerera

---

1 Forms with gc III are tonally the same as these.

2 Forms with gc I and II are tonally the same as these.

4.3.8.5. Potential, Future, Remote Past

Positive

Principal, gc I,II: +G:gc b I/II +T: [{-nga-} {-ca-} {[-a-][-ka-]}] .....+T: [{-e} {-a}] +TMP VI +NUC:VP

MR 17
(20B,1,2,3,10)
9,12

34A

39,38

Potential gloss: "we may....."

	$\{TM_E{}^b\}$	$\{TM_D{}^b\}$
Ip	tingépe	tingábvé
	tingátenge	tingábvúnze
	tingátengese	tingátárise
	tingátandanise	tingárégerere

Future gloss: "we will....."

Ip	ticápa	ticábvá
	ticátenga	ticábvúnza
	ticátengesa	ticátárisa
	ticátandanisa	ticárégerera

Remote Past gloss: e.g. "we gave (before today)"

Ip	takápa	takábvá
	takátenga	takábvúnza
	takátengesa	takátárisa
	takátandanisa	takárégerera

Principal, gc III: +G:gc b III +T: [{-nga-} {-ca-} {[-a-][-ka-]}] .....+T: [{-e} {-a}] +TMP:VIII +NUC:VP

MR 19
(20B,1,2,3,10)
9,12

34C

35,38

Potential gloss: "they may....."

	{TM$_A^h$}	{my$_\rho^{h_1}$}
cl.2	vángápé	vángábvá
	vángaténgé	vángábvúnze
	vángaténgésé	vángátárise
	vángatándánise	vángárégerere

Future gloss: "they will....."

cl.2	vácapé	vácábvá
	vácaténgé	vácábvúnze
	vácaténgésé	vácátárise
	vácatándánisa	vácárégerere

Remote Past gloss: e.g."they gave"

cl.2	vákapé	vákábvá
	vákaténgá	vákábvúnze
	vákaténgésá	vákátárise
	vákatándánisa	vákárégerere

Relative:

+NOM:{rel} +G:ge b +T: [{-mga-} {-ca-} {[-a-]{-xa-}}] ...+T: [{-a} {-a}] +NUC:VE +NMP:VI

34A 39,39

MR 45 18 (20B,1,2,3,10) 9,12

Potential gloss: "they who may..."

cl.2[1]	vangápe	vangábvé
	vangátenge	vangábvúnze
	vangátengese	vangátárise
	vangátandanise	vangárégerere

---

[1] Forms with ge I and II are tonally the same as these.

Potential gloss: "they may....."

	$[TM_A{}^h]$	$\{TM_B{}^h\}$
cl.2	vángapé	vángábvé
	vángatángé	vángábvúnze
	vángaténgésé	vángátírise
	vángatándánise	vángárégerere

Future gloss: "they will....."

cl.2	vácapé	vácábvé
	vácaténgé	vácábvúnze
	vácaténgésé	vácátírise
	vácatándánise	vácárégerere

Remote Past gloss: e.g. "they were"

cl.2	vákapé	vákábvé
	vákaténgé	vákábvúnze
	vákaténgésé	vákátírise
	vákatándánise	vákárégerere

Relative:

+NOM:{rel} +C:gc h +T: $\left[\left\{\begin{matrix}[-nga-]\\[-os-]\\[-a-][-ka-]\end{matrix}\right\}\right]$ -...-+M: $\left[\begin{matrix}[-e]\\[-e]\end{matrix}\right]$ +TMP:V.I, +MUD:V.E

34A 39,38

MR 45 18 (20B,1,2,3,10) 9,12

Potential gloss: "they who may..."

cl.2[1]	vangápe	vangábvé
	vangátenge	vangábvúnze
	vangátengese	vangátírise
	vangátandanise	vangárégerere

---

[1] Forms with gc I and II are tonally the same as these.

Future gloss: "they who will...."

cl.2[1]	vacépa	vacâbvá
	vacátenga	vacâbvúnza
	vacátengesa	vacátárisa
	vacátandanisa	vacárégerera

Remote Past gloss: e.g. "they who gave"

cl.2[1]	vakápa	vakábvá
	vakátenga	vakábvúnza
	vakátengesa	vakátárisa
	vakátandanisa	vakáregerera

Participial:

+G:go b +P: [{-ngé-} {-ca-} {-a-}{-ka-}] ....+T: [{-a} {-a}] +TMP:VA +NUC:VF

MR 19 (20B,1,2,3,10) 5,12 340 37,43

Potential gloss: "if we may ....."

	{TM$_1^{w}$}
Ip[2] (kwa) {TM$_0^{h}$}	
tíngapé	tíngábvá
tíngaténge	tíngábvúnzé
tíngaténgesé	tíngátárisa
tíngatándánisé	tíngáregérera

Future gloss: "if we will...."

Ip[2] (kana)	
tícapí	tícábvá
tícaténga	tícábvúnzé
tícaténgesé	tícátárisa
tícatándánisé	tícéregérere

---

[1] Forms with go I and II are tonally the same as these.

[2] Forms with go III are tonally the same as these.

Remote past gloss: e.g. "if we gave"

(kana)	tákapá	tákábvá
	tákaténga	tákábvunzá
	tákaténgesá	tákátarísa
	tákatándánisá	tákáregérera

Negative

Remote Past: The negative of the remote past is a compound tense and is therefore not treated here. There is no distinction between the recent and remote past negatives.[1]

Potential and Future Principal:

+NEG:{ha$_n$-} +G:go h +T:$\begin{bmatrix}[-nga-]\\[-ca-]\end{bmatrix}$ +T:$\begin{bmatrix}[-e]\\[-a]\end{bmatrix}$ +TMF:Ve +NUC:IP

MR 19 348 37,42
9,12

Potential gloss: "we may not..."

	[TM$_0$ h]	[TM$_1$ w]
Ip[2]	hatíngapá	hatíngabvá
	hatíngaténga	hatíngabvunzá
	hatíngaténgesá	hatíngatárisa
	hatíngatándánisá	hatíngaregérera

Future gloss: "we will not..."

Ip[2]	hatícapá	hatícabvá
	hatícaténga	hatícabvunzá
	hatícaténgesá	hatícatárisa
	hatícatándánisá	hatícaregérera

---

[1] The forms are: principal {ha$_n$-} + go + [-na] + infinitive phrase
relativ ...] + go + [-si-] + [-na] + inf. phrase
participial go + [-si-] + [-na] + infinitive phrase

[2] Forms with go III are tonally the same as these.

Future Relative:[1]

+NOM:{rel} +G:gc b +NEG:{-si-} +T:{-sa-}[2]...+T:{-e} +TMP:Va +NUC:VP

MR 45 18 9,12 32 34B 37,43

Gloss: "they who will not ....."

	$\{TM_C{}^h\}$	$\{TM_I{}^w\}$
cl.2[3]	vasísapé	vasísabvé
	vasísaténge	vasísábvunzé
	vasísaténgesé	vasísátarísa
	vasísatándánisé	vasísáregérere

Participial: The potential and future negative participial are as for the present habitual negative participial. See page 203 above for description and examples. The remote past negative participial is a compound form, see footnote 1 on the previous page.

4.3.3.6. Recent Past

Positive

Principal gc I,II:

+G:gc b I,II +T:{-a-}.....+T:{-a} +TMP:IV + NUC:VP

MR 17 20B 1,2,3,10 38,38

Gloss: e.g. "we gave (today)"

	$\{TM_D{}^b\}$	$\{TM_D{}^b\}$
Ip	tapá	tabvá
	taténga	tabvúnza
	taténgesa	tatárisa
	tatándánisa	tarégerera

---

1 The potential negative relative is as for the present habitual negative relative, see page 203 above.

2 See (e) and footnote 1, page 136, on this morpheme.

3 Forms with gc I and II are tonally the same as these.

Principal gc III:

+G:gc b III +T:{-a-} ....+T:{-a} +TMP:VI +NUC:VP

MR 19
20H
1,2,3,10

39,38

Gloss: e.g. "they gave (today)"

	$[TM_E{}^b]$	$[TM_D{}^b]$
cl.2	vápa	víbvá
	vátenga	vábvúnza
	vátengesa	vátárisa
	vátandanisa	várégerera

Relative:

+NOM:[rel] +G:gc b +T:{-a-}.....+T:{-a} +TMP:III +NUC:VP

MR 45 18
20B
1,2,3,10

35,40

Gloss: e.g. "they who gave (today)"

	$[TM_A{}^h]$	$[TM_E{}^w]$
cl.2[1]	vapá	vabvá
	vaténgá	vabvúnzá
	vaténgésá	vatárísa
	vatándánísa	varégárera

Participial:

+G:gc b +T:{-a-}.....+T:{-a} +TMP:V +NUC:VP

MR 19
20B
1,2,3,10

36,42

Gloss: e.g. "if we gave (today)"

	$[TM_B{}^h]$	$[TM_E{}^w]$
1p[2] (kana)	tápa	tábva
	táténga	tábvunzá
	táténgesá	tátarísa
	tátándánisá	táregérera

---

1 Forms with gc I and II are tonally the same as these.

2 Forms with gc III are tonally the same as these.

4.3.8.7. Present Participial

This is the normal participial form of the present habitual.

+G:go b + PART:{-oi$_p$-}.....+T:{-a} +TMP:III +NUC:VP

MR 17
9,12 35,40

Gloss: "if they ....."

	$\{TM_A^h\}$	$\{TM_B^w\}$
σ1.2[1] (kana)	vacípá	vacíbvá
	vacíténgá	vacíbvúnzá
	vacíténgésá	vacítárisa
	vacítándánisa	vacírégérera

4.3.8.8. Consecutive

Positive

+G:go b +SUBORDINATOR:{-ka$_o$-}....+T:{-a} +TMP I +NUC:VP

MR 17
9,12 35,39

Gloss: "...and then we ....."

	$\{TM_A^b\}$	$\{TM_B^b\}$
Ip[2]	tikapá	tikabva
	tikaténgá	tikabvunza
	tikaténgésá	tikatarisa
	tikatándánisa	tikaregerera

Negative

+G:go b +SUBORDINATOR:{-ka$_o$-} +NEG:{-sa-}...+T:{-a} +TMP:I +NUC:VP

MR 17
9,12 33 35,39

---

1 Forms with go [illegible] and II are tonally the same as these.

2 Forms with go [illegible] are tonally the same as these.

Gloss: "...and then we didn't ....."

1p[1]	tikasapá	tikasabva
	tikasaténgá	tikasabvurza
	tikasaténgésá	tikasatárisa
	tikasatándánise	tikasaregerera

4.3.8.9. Subjunctive

Positive

+G:gc b .....+T:{-e} +TMP:III +NUC:VP

MR 19 35,40
9,12

Gloss in the context /ndinódá kúti.../ "I want them to ....."

	$\{TM_A^h\}$	$\{TM_F^w\}$
cl.2	vépé	vábvé
	váténgé	vábvúnzé
	váténgésé	vátárise
	vátándánise	várégérere

Hortative: +HORTATIVE:{ha_h-} +G:gc b .....+T:{-e} +TMP:IX +NUC:VP

MR 17 39,39
9,12

Gloss: "let us....."

	$\{TM_E^b\}$	$\{TM_S^b\}$
1p	hátipe	hátibve
	hátitenge	hátibvunze
	hátitengese	hátitarise
	hátitandanise	hátiregerere

Negative

+G:gc b +NEG:{-sa-}.....+T:{-e} +TMP:III +NUC:VP

35,40

MR 17/19 33
9,12

---

1 Forms with gc III are tonally the same as these.

Gloss: "Don't .....!"

	$[TM_A{}^b]$	$[TM_E{}^w]$
Ila [1]	usápé	usébvé
	usáténgé	usábvúnzé
	usáténgésé	usátárise
	usátándánise	usárégérere

[illegible] the context /.....kúti ..../ the ga is H by MR 19 and the gloss is: "I say, them not to ...."

o1.2	vásápé	vásébvé
	vásáténgé	vásábvúnzé
	vásáténgésé	vásátárise
	vásátándánise	vásárégérere

[illegible]

+HORTATIVE:[ha$_D$-] +G:[-a$_E$ b] +NEG:[-sa-] +T:[-e] +TMP:IX +NUC:VE

MR 1/ 9,12 39,39

Gloss: "[illegible] not ....."

	$[T\ ^b]$	$[TM_E{}^b]$
Ip	ha'vsápe	hátisabve
	ha'isatenge	hátisabvunze
	hátisatengese	hátisatárise
	hátisatandanise	hátisaregerere

4.3.8.10. Exclusive

+[illegible]ga b +T:[-o$_E$-],....+T:[-o] +TMP:VI +NUC:VP

MR 1/ 1,2,3,10 39,38

Gloss: "should [illegible]"

	$[TM_E{}^b]$	$[TM_D{}^b]$
Ip	tópa	tóbva
	tótenga	tóbvúnza
	tótengesa	tótárisa
	tótandanisa	tórégérera

[1] This is a command form and the subject ga has therefore to be II.

4.4. CLAUSES

Clauses are constructions whose constituents are a substantive phrase and a predicate, the latter being a phrase or inflected phrase. Clauses may be distinguished according to the nature of their predicate constituent, and for some clause types the predicate may be of independent (principal) or dependent (participial, subjunctive, or consecutive) type.

4.4.1. Verbal Clause

The predicate constituent of a verbal clause is an inflected verbal phrase (§ 4.3.8. above) which may include tense inflection and be either principal (non-subordinate) or participial (subordinate). Other subordinate but not tense-inflected types are the consecutive and the subjunctive. The subject of the predicate is a substantive phrase constituent, the former showing concordial agreement with the nucleus of the substantive phrase. The subject substantive phrase may or may not occur and is subject to displacement to yield orders other than subject + predicate.

Summary: ± SUBJECT:substantive phrase + NUCLEUS:verbal phrase

Musíkaná uyo asíngafámbe zvakánáka ácapúnzá cirongó.
(substantive phr /e) (verbal phrase)
(verbal clause)

That girl who is not walking properly will break the water-pot.)

Húkú idzo dzínokandira múzái muuswá unyóró.
(SP) (verbal phrase)
(verbal clause)

Those fowls lay eggs in the wet grass.

Mumbé umo múnodziyá.
(SP) (verbal phrase)
(verbal clause)

In the house it is warm.

Ripáyí mudzíídzísi marí.
(verbal phrase)
(verbal clause)

(Pay the money to the teacher!)

Ánoita zvakáipa.
(verbal phrase)
(verbal clause)

(He engages in bad activities, lit. he does (that) which is bad.)

Kana ndicísvínúra mazísó mangwánaní, ndinótarisa ngúvá.
(participial verbal phrase) (verbal phrase)
(verbal clause) (verbal clause)

When I open my eyes in the morning I look at the time.

Údzáyí mudzíídzísi kuti ápámhídze mubvunzo.
(verbal phrase) (subjunctive verbal phrase)
(verbal clause) (verbal clause)

(Tell the teacher to repeat the question.)

Ndakámúka mangwánaní, ndikapfeka, ndikashamba kumesó.
(verbal phrase) (verbal phrase) (verbal phrase).
(clause) (clause) (clause)

(I got up in the morning, got dressed, and washed my face.)

4.4.2. Copulative Clause

The predicate constituent of this type of clause is a copulatively inflected substantive phrase.

Summary: ± SUBJECT:substantive phrase + NUCLEUS: copulative phrase

Babá wángu múrídzi wécitóro.
(SP) (Cop.P)
(copulative clause)

(My father is the owner of the store.)

Múcéce arí kucémá mumbá.
(Cop.P)

(It is a baby crying in the house.)

Ítsíka yédú yokúgeza maóko pákudyá.
(Cop.P)
(copulative clause)

(It is our custom to wash our hands at the time of eating.)

Ndhédzangú. Idzo ndhédzakó.
(Cop.P) (SP) (Cop.P)
(cop.clause)(copulative clause)

(It is mine. That one is yours.)

4.4.3. Associative Clause

An associative clause has as predicate constituent an associative phrase which may be principal or participial, positive or negative.

Summary: ± SUBJECT:substantive phrase + NUCLEUS: associative phrase

Vakádzí avo vánemvúrá.
(SP)(Assoc.P)
(associative clause)

(Those women have (some) water.)

Kúnaamái vóga.
(Assoc.P)
(clause)

(There is mother alone.)

Kana kúsiná amái vóga ndicáŋya.
(Assoc.P) (verbal phrase)
(clause) (clause)

(If mother isn't there alone I will come.)

Hatíná kudyá kwakánaka.
(Assoc.P)
(associative clause)

(We don't have nice food.)

4.4.4. Ideophone Clause

Ideophone clauses have as predicate constituent an ideophone phrase. The predicate can have subject and objects, but the relationship of these to the predicate does not appear to be the same as that of subject to a verbal phrase or object to a verb phrase. They are in a sense grammatically "detached" from the predicate, and "topic" seems a good term to denote this relationship.

Summary: ± TOPIC:SP + NUCLEUS:ideophone phrase ± TOPIC:SP ± TOPIC:SP

Vanhu vósé zíí. (All the people were quiet.)
(SP)
(ideophone clause)

Zíí vanhu vósé. (All the people were quiet.)
(SP)
(ideophone clause)

Njivá tutú sádza. (The dove snatched the sadza.)
(SP) (SP)
(ideophone clause)

Bvutú sádza njivá. (The dove snatched the sadza.)
(SP) (SP)
(ideophone clause)

4.4.5. Presentative Clause

A presentative clause has as constituents a presentative phrase and a substantive phrase. The latter is optional and occurs after the presentative phrase.

Summary: + NUCLEUS:presentative phrase + SUBJECT:SP

Hávo vanhu váye. (There are those people.)
(SP)
(clause)

Héai cigaro cákó. (Here is your chair.)
(SP)
(clause)

Hóhwúno hwahwá hwakánáka. (Here is the good beer.)
(SP)
(clause)

4.5. SENTENCE

Sentence constructions involving more than one clause are extremely common and display very interesting and complex structures. There is always one main, non-subordinate clause in a sentence, other clauses being subordinated in one way or another or conjoined. The constituents of sentences are therefore clauses and conjunctions, some of the latter serving as clause introducers. While the outlines of complex sentence structures are clear, very little formal work has been done on this at this stage. The morpho-syntactic outline given above has been limited to sentences of single clause type, as the focus has been on constructions which straddle the morphology-syntax boundary. A few examples of complex sentences are given below.

Kana vachítándánísa mapíeni makúrú páne ngózi yó.urúmwá nawó.
(verbal clause) (associative clause)
(sentence)

(When they chase the big baboons there is danger of being bitten by them.)

Kare kare taímánikídzwa kugadzira migwagwa asi zvino tinopiwá mibayiro.
(verbal clause) (verbal clause)
(s e n t e n c e)

(Long ago we used to be forced to repair the roads, but now we are given wages.)

Ndhcúpi mitoo waánogarófita kuti vanhu vadádére navó?
(copulative clause) (verbal clause)
(s e n t e n c e)

(In what way does he always make the people tremble?)

Ungádyare maruva akánáka kana úiné ivhú rakánáka rekúsadyárira.
(verbal clause) (associative clause)
(s e n t e n c e)

(You can grow lovely flowers if you have good soil in which to plant them.)

APPENDIX I

AUTONOMOUS TONAL GRAMMAR

The assignment of all Shona tonal sequences to morphemes whose realisation is only tonal appears to be the only serious taxonomic alternative (in principle) to the integrated morphological analysis developed in this work. Autonomous tonal grammar avoids the greatly increased morphophonemic complexities present in an integrated analysis, but raises other kinds of difficulties, and these are outlined below.

1. Autonomous tonal grammar is justified on the grounds of substrate and tonal morphological non-congruence. It is important to note that this non-congruence is a feature of the stem tones in verbal forms but in few other forms. Shona, apparently like Tswana, and unlike the languages of the Nguni group, Sukuma and Kikuyu, is not characterised by extensive non-congruence in different types of grammatical constructions. While the assignment of verb stem tones to tonal morphemes is probably the best taxonomic treatment (although not without its weaknesses, see pages 34, 35), there is little justification for extending this treatment, via infinitives, to other forms such as nominals in which non-congruence is not a feature. Different tone sequences on verb stems can perhaps best be interpreted as involving replacive tonal morphemes, but the tonal perturbations on nominal forms are clearly of a morphophonemic nature and are easily handled in these terms.

2. The recognition of an autonomous morphological system whose realisation is only tonal does not avoid the necessity of having to recognise morphophonemic alternations in the realisations of tonal morphemes. For example, consider the the relationship of tone sequences on extended stems having the same root to one another in any one conjugational form.

kuténgá	to buy	handícaténga (I will not buy)
kuténgésá	to sell	handícaténgesá (I will not sell)
kuténgéséra	to sell for	handícaténgéserá (I will not sell for)

The HH, HHH, and HHHL sequences in the first set are not contrastive as they occur in different environments, namely on substrate domains of different syllabic length. Only one morpheme is therefore involved, and the different sequences occurring are conditioned morphophonemic variants. The same applies to the HL, HLH, HHLH sequences in the second set of forms. Similarly, all cases of tonal dissimilation involve morphophonemic alternants and not replacive morphemes.

3. A very much larger number of tonal morphemes will be recognised than is the case in an integrated morphological analysis. The problems in connection with certain tonal morphemes outlined in § 2.4.2. (page 34) are greatly intensified. In what sense are the tonal morphemes recognised "meaningful", and how can semantic differences between lexical items be correlated with different replacive morphemes?[1] The members of a paradigmatic class are contrastive, but to what extent is this true of these tonal forms? In short, it seems that these forms are not morphemes in the conventional sense of the term.

4. The problem of the nature of lexical entries (discussed in § 2.4.1., page 34) is extended to the whole lexicon.

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[1] Consider, for example, the following pairs of verbal forms:-

kucéra HH (to draw water) kucera LL (to dig)
ndicácera LL(I will draw water) ndícácéra HL (I will dig)

The tonal morphemes HH, HL, and LL must signal the difference in meaning between "dig" and "draw water", in which case HH and LL with the root meaning "draw water" presumably contrast with LL and HL with the root meaning "dig". Just what does the morpheme LL mean, or are there two different LL morphemes?

5. The segmentation into tonal morphemes (vertically) cannot be done without a heavy reliance on substrate segmentation, as tonal and substrate morphological boundaries would coincide to a large extent.

6. Accounting for the inter-relationship, and the syntactic functioning of two autonomous or semi-autonomous morphological systems (substrate and tonal) will doubtless present very considerable complexity.

7. Autonomous tonal grammar for nominals and verbals raises an interesting question for particles. If tone is not inherent (in some sense or other) in nominal and verbal lexical items, is it inherent in the tonally invariant particles?

8. A principle of morphemic realisations in terms of either segmentals or tones, but not both, appears to be theoretically unjustifiable and empirically unsupported.

APPENDIX II

TRANSFORMATIONAL-GENERATIVE TREATMENT OF VERBAL TONES[1]

A transformational-generative (TG) analysis of verbal tones is given in outline form below as this provides a significantly different alternative to the taxonomic description explored in this dissertation, and one which avoids some of the difficulties discussed in § 2.4., pages 33 to 36 above. The reason for the difference between these two treatments is essentially due to the transformational deep:surface-structure distinction as opposed to the surface structure nature of taxonomic analysis. Thus in the taxonomic analysis presented above, Zezuru sentences are given a direct classificatory analysis in terms of elements of various kinds, these elements being of both a phonological and a morphological nature. In a TG analysis an underlying deep structure, relevant for semantic interpretation, is recognised for every sentence, and this deep structure, which is describable in constituency terms, is related to the surface structure (the actual forms of sentences) by operations (i.e. transformations) which may involve permutations, additions, or deletions of constituents. These characteristics of TG grammars are well explored in many transformational writings and are therefore not treated here.[2]

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1 Verbal tone patterning has been chosen for this generative study as this involves by far the greatest tonal complexity in Shona. This brief description is given against the background of the analysis in the main body of the dissertation, and minimal exemplification is therefore given here.

Mr Frank Heny, in an unpublished term paper presented at UCLA, "Tone and the Verbal Complex in Zezuru," (no date) first explored a generative analysis of Shona tone and this in part served as the stimulus to my own work. Professor L.W.Lanham encouraged me to develop a rigorous treatment in TG terms, and I wish to acknowledge helpful consultation with him and Mr A. Traill. Chomsky and Halle's The Sound Pattern of English provided the theoretical context in which this analysis was developed. Mr E. Voeltz in a brief unpublished paper, "Topics in Tone Assignment in Xhosa," has explored nominal tones in generative terms. N.V. Smith's article, "Tone in Ewe," appears to have been the first generative treatment of tone in a Niger-Congo language.

2 A useful introduction may be found in Chomsky and Halle, op. cit., pages 3 to 11.

It is important to note that certain features which must be treated as contrastive taxonomically are treated as merely surface phenomena in a TG grammar. This applies particularly to tone patterns (apart from lexical tones) which are taxonomically analysed as part of grammatical structure but are transformationally treated as phonological patterning, accounted for by phonological rules, although reflecting certain syntactic facts. In a TG treatment, tonal patterning, as is the case with morphology, is subordinated to, and integrated within, the treatment of the properties of sentences. In addition to this difference in principle between the two treatments, it is interesting to note one particular difference in the resulting description of Shona tonal phenomena. In the taxonomic analysis above, nominal and verbal tones are described in different terms, the former involving mostly morphophonemic perturbations, and the latter mostly extensive replacive morphemes of tone. Generatively, one homogeneous interpretation of nominal and verbal tones results, and essentially the same rules account for both.

The rules which account for Bantu tone patterning in a TG grammar are therefore phonological rules which operate on the syntactic output of the grammar.[1] The formulation of these rules therefore presupposes a TG syntactic treatment, the latter of course not yet having been formulated. However, enough is known of the syntactic facts of Shona to explore, if only in a programmatic and tentative manner, the kind of tonal rules which would form part of a TG grammar.

Lexical Entries

Most of the formatives appearing in the syntactic surface structure strings appear there by selection from the lexicon, where they are listed with their phonological and semantic specifications. The nature of the phonological entries in the lexicon is of some interest as certain problems are raised in this connection. Such entries are, of course,

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1 The output of the syntactic component (i.e. the phrase structure and transformational rules) is bracketed strings of formatives. These are "surface" syntactic forms.

not phonemic, as the phoneme is not recognised as a natural phonological entity in generative phonology.

The phonological representation of morphemes in the lexicon is in terms of abstract systematic phonemic matrices whose specifications are distinctive features with binary (+ or -) values. Phonological redundancies, which are a feature of the phonological systems of all languages, are not indicated in the lexicon, predictable feature values being filled in by the operation of redundancy rules. The latter were formerly considered to be part of the phonological (P) rules, but it has been pointed out by Stanley in a recent article[1] that as redundancy rules are essentially rules which fill in feature values, whereas P rules are rules which change feature values, the two types of rules must be clearly distinguished. After the application of redundancy rules the lexical matrices are fully specified, and it is on these fully specified matrices that the phonological rules operate, mapping them into fully specified phonetic representations.

As there are only two tones in Shona, these will be indicated by the feature <H>, <+H> being H tone and <-H> being L tone.[2] The lexical tones of nominal stems are unpredictable, and each vowel of these stems must therefore be specified for tone. Verb stem tones, on the other hand, are very largely predictable and their tones are therefore not fully specified in the lexicon, the predictable tone values being filled in by redundancy rule.[3]

There is a problem in connection with the kind of tonal specification required for verb roots in the lexicon. As tone is clearly lexically contrastive, some indication of the

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1 Richard Stanley, "Redundancy Rules in Phonology," Language 43, 2, 1967, pages 393 to 436.

2 The first vowel of vowel-commencing, non-deverbative noun stems is, however, always L. See pages 20 and 88 above.

3 There are comparatively few stems which do not conform to the general pattern of verbal tones. Some of these exceptions are listed on page 22.

tonal properties of verb roots must be given. It is convenient to have as input to the P rules verb stem tone sequences of the infinitive. That is, stems with low roots will have all L tones, and stems with high roots will have all but the fourth and subsequent tones H. Redundancy rules will therefore have as output the high and low sequences as they occur (inter alia) in the infinitive. These sequences are:-

$L_1L_2L_3L_4 \ldots L_n$ for low roots

$H_1H_2H_3L_4 \ldots L_n$ for high roots

where the subscript numerals indicate the requisite number of vowels in the stem.

A simple indication of H or L for any particular verb root is therefore all that is required for most of these roots in the lexicon. The difficulty is that there is no <u>non-arbitrary</u> way of choosing one or other of the vowels of the root for marking the feature <+H> or <-H>. Whichever vowel is chosen, the redundancy rule will spread the feature value to the other vowels. There also appears to be no means in generative phonological theory of indicating phonological values by class membership, which is perhaps the most intuitively satisfying solution.

As the choice of vowel for marking of the tone feature is an arbitrary one, the first vowel has been chosen for this. The tones of irregular verbs, such as those listed on page 22, cannot be handled by a simple redundancy rule, and the unpredictable tone features will have to be individually marked. The form:-

kushámwarídzana (to be friendly with)

cf. shámwarí (friend)

is of particular interest as it is derived from a noun stem and preserves the unpredictable nominal tones. This single example suggests a derivative process which will raise interesting questions for lexical tone redundancy, and this deserves further investigation.

It should be noted that the predictable tones of verb stems cannot be treated by redundancy rules in the lexicon (i.e. before insertion into phrases structure strings) as the lexical

tone is spread not only over the verb root but also over verbal extensions and the final suffix of the verbal form. The final suffix, and at least some of the extensions are inserted transformationally. It therefore seems that the redundancy in tone features of verb stems should be accounted for in the adjustment rules relating the syntactic surface structure strings to the input of the P rules.[1]

Verb Stem Tone Patterns

The most complex aspect of verbal tone patterning is the large number of replacive tone patterns or profiles occurring on the verb stem. The profiles which occur with high and low stems are listed below.

High Stems	Low Stems
H	L
HH	LL
HHH	LLL
HHHL	LLLL
L	H
HH	HL
HHH	HLL
HHHL	HLLL
L	H
LL	HL
LLL	HHL
LLLL	HHLL
H	L
HL	LH
HLL	LHL
HLLL	LHLL
H	H
HL	LH
HLH	LHL
HHLH	LHLL
L	H
HL	LH
HLH	LHH
HHLH	LLHH
	H
	HH
	HHL
	HHLL

1 See the discussion of adjustment rules in Chomsky and Halle, op. cit., pages 9 and 10.

These profiles are paired in different combinations, one for high roots and one for low roots, in the different conjugational forms. Fortune has termed the pairs of tone profiles "tone conjugations",[1] and assigned a number to each, as follows:-

TC I

H	L
HH	LL
HHH	LLL
HHHL	LLLL

TC II

H	H
HH	LH
HHH	LHH
HHHL	LLHH

TC III

H	H
HH	HH
HHH	HHL
HHHL	HHLL

TC IV

H	H
HL	HL
HLL	HLL
HLLL	HLLL

TC V

L	L
HL	LH
HLH	LHL
HHLH	LHLL

TC Va

H	H
HL	LH
HLH	LHL
HHLH	LHLL

TC VI

L	H
LL	HL
LLL	HLL
LLLL	HLLL

TC VII

L	L
HH	LH
HHH	LHL
HHHL	LHLL

TC VIII

H	H
HH	HL
HHH	HLL
HHHL	HLLL

TC IX

L	L
LL	LL
LLL	LLL
LLLL	LLLL

TC X

H	H
HH	HL
HHH	HHL
HHHL	HHLL

TC I is generatively accounted for by the redundancy rule discussed above. The other tone conjugations are the result of the application of various P rules. The redundancy rule and the P rules for each profile are indicated on page 232, following the rule conventions and notation explanation overleaf.

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1 In unpublished student notes.

Rule Conventions and Notation

The symbols and conventions indicated below are used in the formulation of tonal P rules.

→	rewrite as
/	in the context of
__	indicates position of the segment concerned
< >	encloses feature value
<H>	feature for tone
+ in < >	plus, so <+H> is "high tone"
- in < >	minus, so <-H> is "low tone"
α in < >	feature value either + or -
( )	indicates a segment which may or may not be present, i.e. this is a notational device for summarising several rules. The following tone rules, for example, are needed for verb tones:-

1. -H -H → -H +H
2. -H -H -H → -H +H -H
3. -H -H -H -H → -H +H -H -H

These can be summarised as:-

1. -H → +H / -H __
2. -H → +H / -H __ -H
3. -H → +H / -H __ -H -H

But clearly the generalisation we wish to express is that in all cases the second <-H> in the sequence becomes <+H>. Using the parenthesis notation, the above three rules can be expressed as:-

4. -H → +H / -H __ (-H(-H))

All the rules abbreviated by parenthesis notation are rules which apply to sequences of different lengths. These rules are therefore necessarily disjunct.[1]

{ } a device for rule abbreviation, enclosing mutually exclusive rules or contexts. For example:-

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[1] Rules are disjunctively ordered in the sense that "if one of these rules applies to a certain substring, the other members of the block [of rules] are not applicable to this substring in this stage of the cycle;" Chomsky and Halle, op. cit., page 60.

$/\begin{Bmatrix} A \\ B \\ C \end{Bmatrix}$ in the context A, or B, or C

$\begin{Bmatrix} A \rightarrow X \\ B \rightarrow Y \\ C \rightarrow Z \end{Bmatrix}$ summary of three rules of the form: $\begin{matrix} A \rightarrow X \\ B \rightarrow Y \\ C \rightarrow Z \end{matrix}$

But only one of the rules apply to any given string, i.e. they are disjunctively ordered.

+ outside < > denotes formative boundary -- only where this need be specifically indicated. Note that by convention every bracket [or] carries the segment boundary + to the left and right respectively.

$[_{vs}$ $]_{vs}$ indicates the bracketed string of formatives (viz. verb root-extension(s)-final suffix) which is the verb stem.

Certain rules are sensitive to the kind of syntactic bracketing of the string. Insufficient work has been done on Shona syntax in order to formally characterise those bracketings in which participial, subjunctive, and consecutive verb forms will appear. Resort is therefore made to an informal notational device to represent the kind of sentence bracketing relevant to the operation of the P rule concerned, as follows:-

/T in the context of a bracketed string resulting from the application of the transformation specified.

T_{subj} subjunctive transformation

T_{rel} relative transformation

T_{part} participial transformation

T_{obj} object concord insertion transformation.

The P rules required to account for all the profiles occurring on verb stems are given below. The rule for each sequence of a profile is given individually, and then an abbreviated rule for the whole profile is given.

THE INPUT TO THESE 5 RULES IS THE OUTPUT OF THE SECONDARY REDUNDANCY RULE WHICH SPREADS THE LEXICAL TONE FEATURE <+H> OR <-H> OVER ALL SYLLABLES IN THE VERB ROOT, EXTENSION(S) (IF ANY), AND FINAL SUFFIX.A NOTE THAT AS THE EXTENSIONS AND FINAL SUFFIX ARE TRANSFORMATIONALLY INTRODUCED, THIS REDUNDANCY RULE CANNOT BE PART OF THE LEXICON, WHICH IN TURN MEANS THAT LEXICAL ITEMS ARE NOT INSERTED WITH FULL PHONOLOGICAL SPECIFICATION.

AS IN THE CASE OF HIGH VERBS THE REDUNDANCY RULE SPREADS THE FEATURE <+H> OVER THE FIRST THREE SYLLABLES ONLY, THE REMAINDER BEING <-H>.

THE REDUNDANCY RULE IS OF THE FORM $\left\{ \begin{array}{l} \langle +H \rangle \rightarrow [{}^{+H}_{V_S} \; {}^{+H}_{V_S} \; {}^{+H}_{V_S} \; \langle +H \rangle \; \langle +H \rangle \; \ldots \; \langle +H \rangle_0]_{V_S} \\ \langle -H \rangle \rightarrow [{}^{-H}_{V_S} \; {}^{-H}_{V_S} \; \ldots \; \langle -H \rangle_0]_{V_S} \end{array} \right\}$

Tone Consonant	Vowel Class	Tone Morpheme	Rules Examples	Abbreviated Rule
VI, IX	High	−H −H −H −H −H −H −H −H −H −H	+H → −H +H +H → −H −H +H +H +H → −H −H −H +H +H +H −H → −H −H −H −H	Rule 1 $\langle +H \rangle_\alpha \rightarrow \langle -H \rangle_\alpha \; / \; [\underline{\quad}]_{V_S}$
IV, V, VII	Low	+H +H −H +H −H −H +H −H −H −H	−H → +H −H −H → +H −H −H −H −H → +H −H −H −H −H −H −H → +H −H −H −H	$\langle -H \rangle \rightarrow \langle +H \rangle \; / \; [\underline{\quad} \langle -H \rangle_0]_{V_S}$
V_a	High	+H +H −H +H −H +H +H +H −H +H	+H +H → +H −H +H +H +H → +H −H +H +H +H +H −H → +H +H −H +H	Rule 2 $\langle +H \rangle \rightarrow \langle -H \rangle \; / \; [\overline{\#}\underline{\quad} \#]_{V_S}$ $\langle +H -H \rangle \rightarrow \langle -H +H \rangle \; / \; [\langle +H -H \rangle \underline{\quad}]_{V_S}$
V_b, VIII	High	−H (REST AS FOR V_a)	+H → −H	$\langle +H \rangle \rightarrow \langle -H \rangle \; / \; [\underline{\quad}]_{V_S}$
V_c	Low	−H −H +H −H +H −H −H +H −H −H	−H −H → −H +H −H −H −H → −H +H −H −H −H −H −H → −H +H −H −H	$\langle -H \rangle \rightarrow \langle +H \rangle \; / \; [\underline{\quad} \langle +H -H \rangle]_{V_S}$
V_d	Low	+H (REST AS FOR V_c)	−H → +H	$\langle -H \rangle \rightarrow \langle +H \rangle \; / \; [\underline{\quad}]_{V_S}$
X	Low	+H +H −H +H +H −H +H +H −H −H	−H → +H −H −H → +H −H −H −H −H → +H +H −H −H −H −H −H → +H +H −H −H	Rule 3 $\langle -H \rangle \rightarrow \langle +H \rangle \; / \; [\underline{\quad}_{V_S} \langle -H \rangle]_{V_S}$ $\langle -H -H \rangle \rightarrow \langle +H +H \rangle \; / \; [\underline{\quad}_{V_S} \langle -H -H \rangle]_{V_S}$
II	Low	+H −H +H −H +H +H −H −H +H +H	−H → +H −H −H → −H +H −H −H −H → −H +H +H −H −H −H −H → −H −H +H +H	Rule 4 $\langle -H \rangle \rightarrow \langle +H \rangle \; / \; [\langle -H \rangle \underline{\quad}]_{V_S}$ $\langle -H -H \rangle \rightarrow \langle +H +H \rangle \; / \; [\langle -H \rangle -H \underline{\quad}]_{V_S}$
III	Low	+H +H +H +H +H −H +H +H −H −H	−H → +H −H −H → +H +H −H −H −H → +H +H −H −H −H −H −H → +H +H −H −H	Rule 5 $\langle -H \langle -H \rangle \rangle \rightarrow \langle +H \langle +H \rangle \rangle \; / \; [\underline{\quad}_{V_S}$

These rules, as formulated on the previous page, include no indication of any environment other than phonological, that is, there is no indication as to the morphological and syntactic context in which each rule applies. The occurrence of the tone conjugations accounted for by these rules is dependent on the following:-

1. the conjugational morphemes in the verbal form
2. whether the verbal form is positive or negative
3. whether there is an object concord present or not
4. whether the verbal form is principal, participial, relative, subjunctive, or consecutive, i.e. the kind of syntactic bracketing of the string.

In addition to contextual phonological features, therefore, the phonological rules must be made sensitive to these properties of the string of formatives for their operation.

The contextually fully specified rules accounting for all occurrences of all the tone conjugations are listed below. The numbering of these rules is the same as that of the identical (although contextually unspecified) rules above. Rules 1 to 5 are all disjunctively ordered in relation to one another, that is, each of these rules cannot be applied to the output of any of the others, or recursively to its own output. It should be noted that rules 2 and 3 are blocked for the strings of formatives indicated and this blocking is shown by X. Illustration of the application of rules 1 to 5 is not given at this stage as further rules for the tone of subject gender concords and conjugational morphemes are required, and these additional rules are closely related to the application of rules 1 to 5.[1]

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1 Some derivations of verbal forms involving the application of all the rules necessary for the assignment of tones to the whole verbal form are given after the rules for the subject gender concords and conjugational morphemes.

RULE 1

A. $\langle +H \rangle_n \rightarrow \langle -H \rangle_n$

B. $\langle -H \rangle \rightarrow \langle +H \rangle$

$/ \; [\_\_]_{Vs} \; [\_\_]_{Vs}$

$/ \; \left\{ \begin{array}{l} +H \\ nga \\ +H \\ cha \\ +H \\ ka \\ +H \\ a \\ +H \\ o \\ +H \\ SC\text{-}a\text{-}OC_1 \end{array} \right\} + \_\_\_\_$

Notice the context specification:-

Lexical -- when the verb stem is preceded by one of the morphemes listed.

Phonological -- when the morpheme is <+H>, in the case of a preceding OC_1 when this is <+H> because of tonal displacement.

Rule 1A lowers a sequence of H's.

Rule 1B raises the first L of a sequence of L's.

RULE 2

A. $\langle +H \rangle \rightarrow \langle -H \rangle \; / \; [\langle +H \rangle \_\_]_{Vs}$

B. $[\_\_]_{Vs} \; / \ldots \langle +H \rangle + \_\_\_\_$

C. $\langle +H \langle +H \rangle \rangle \rightarrow \langle -H \; +H \rangle \; / \; [\langle \langle +H \rangle + H \rangle \_\_]_{Vs}$

D. $\langle -H \rangle \rightarrow \langle +H \rangle \; / \; [\langle -H \_\_ (-H (-H)) \rangle]_{Vs}$

E. $[\_\_]_{Vs} \; / \ldots \langle -H \rangle + \_\_\_\_$

$/ \; \left\{ \begin{array}{l} T_{part} \\ \ldots neg \ldots \\ SC\text{-}a\text{-}R\text{-}a \; / \; T_{rel} \end{array} \right\}$

	ha-SC-(OC)-R-a	...neg... ha-SC-a-(-OC-R-a	SC-ka-sa-(OC)-R-a	ku-sa-(OC)-R-a
A	λ			X
B				X
C	X			X
D				X
E	X			X

Rule 2C lowers the penultimate H (high verbs)

Rule 2D raises the second L (low verbs)

Rules 2B and 2E involve phonological context

Notice the complex grammatical specification:- Rule 2 applies in the context of T_{part}, or a negative morpheme (or both), or to SC-a-R-a when T_{rel}.

The sub-parts of the rule are blocked in certain contexts, as indicated by X. Where no subsequent rules apply to these strings, they are covered by the spreading rule.

RULE 3

$$\left\{\begin{array}{lll} \text{A.} & \langle -H\rangle \rightarrow \langle +H\rangle & / \ [\underset{Vs}{\_\_} (\langle -H\rangle)]_{Vs} \\ \text{B.} & \langle -H-H\rangle \rightarrow \langle +H+H\rangle & / \ [\underset{Vs}{\_\_ -} \langle -H(-H)\rangle]_{Vs} \end{array}\right\} / T_{obj} \times \left\{\begin{array}{l} \text{SC-a-OC-R-a}, \text{ when SC} \left[\begin{array}{l}\langle I\rangle \\ \langle II\rangle\end{array}\right. \\ \text{ha-SC-OC-R-e} \\ \text{SC-OC-R-e} \end{array}\right\}$$

This rule affects only low verbs.

The rule raises the first or first two L's.

The rule applies only in strings having an OC, i.e. when T_{obj} has been applied. For certain strings the rule is blocked, as indicated by I.

RULE 4

$$\left\{\begin{array}{lll} \text{A.} & \langle -H\rangle \rightarrow \langle +H\rangle & / \ [(\langle -H\rangle)\_\_]_{VB} \\ \text{B.} & \langle -H-H\rangle \rightarrow \langle +H+H\rangle & / \ [((-H)-H\_\_\ \_\_]_{VB} \end{array}\right\}$$

This rule affects only low verbs.

The rule raises the last or last two L's.

The rule applies when the verb stem is not preceded by any formatives, i.e. when there is a word boundary immediately to the left of the verb stem. This is indicated by the bracketing labelled VB (verb).

RULE 5

$$\langle -H(-H)\rangle \rightarrow \langle +H(+H)\rangle \ / \ [\underset{Vs}{\_\_} - / \left\{\begin{array}{l} T_{subj} \\ T_{part} \ / \ chi \end{array}\right\}$$

This rule affects only low verbs.

The rule raises the first two L's, but notice that this rule differs from rule 3 with respect to LL sequences.

The rule applies only to strings resulting from the application of T_{subj} or T_{part}, in the latter case only when the participial morpheme chi is inserted.

Derivations

The derivations below illustrate the application of some of rules 1 to 6. Many derivations would be required to illustrate all the varieties of tonal patterning in verbal forms, and as this cannot be done here only TC's IV, VI, and VIII are illustrated. In all cases the input to the P rules is the output of the redundancy rule which spreads the lexical tone over the verb stem.

EXCLUSIVE (TC VI)

"should I ...?"

High Roots			Low Roots		
ndóáya	L	(... eat)	ndóbvá	H	(... leave)
ndótenga	LL	(... buy)	ndóbvúnza	HL	(... ask)
ndótengesa	LLL	(... sell)	ndótárisa	HLL	(... look)
ndótandanisa	LLLL	(... chase)	ndórégerera	HLLL	(... forgive)

1. Input:

gó + ó + verb stem
+H(+H(+H(-H)))

gó + ó + verb stem
-H(-H(-H(-H)))

2. Rule 1:

gó + ó + verb stem
-H(-H(-H(-H)))

gó + ó + verb stem
+H(-H(-H(-H)))

This gives the above forms with TC VI.[1]

RECENT PAST PRINCIPAL POSITIVE (I,II: TCIV, III: TC VI)

ndadyá	H	(I ate)	ndabvá	H	(I left)
ndaténga	HL	(I bought)	ndabvúnza	HL	(I asked)
ndaténgesa	HLL	(I sold)	ndatárisa	HLL	(I looked)
ndatándanisa	HLLL	(I chased)	ndarégerera	HLLL	(I forgave)
ádya	L	(he ate)	ábvá	H	(he left)
átenga	LL	(he bought)	ábvúnza	HL	(he asked)
átengesa	LLL	(he sold)	átárisa	HLL	(he looked)
átandanisa	LLLL	(he chased)	árégerera	HLLL	(he forgave)

1 The vowel of the gc, together with its tone, is elided by a P rule not dealt with here.

1. Input:

gó + a + verb stem +H(+H(+H(-H))) -H(-H(-H(-H)))
gó + a + verb stem

2. Rule 6:

gc + á + verb stem +H(+H(+H(-H))) -H(-H(-H(-H)))
gc + á + verb stem

3. Rule 1:

gc + á + verb stem -H(-H(-H(-H))) +H(-H(-H(-H)))
gc + á + verb stem

This gives the above 3rd person forms with TC VI.

4. Rule 8:

gc + à + verb stem +H(-H(-H(-H))) +H(-H(-H(-H)))
gc + à + verb stem

This gives the above 1st and 2nd person forms with TC II.

REMOTE PAST PRINCIPAL POSITIVE (I,II: TC VI, III: TC VIII)

ndakádya	L	(I ate)	ndakábvá	H	(I left)
ndakátenga	LL	(I bought)	ndakábvúnza	HL	(I asked)
ndakátengesa	LLL	(I sold)	ndakátárisa	HLL	(I looked)
ndakátandanisa	LLLL	(I chased)	ndakárégerera	HLLL	(I forgave)
ákadyá	H	(he ate)	ákábvá	H	(he left)
ákaténgá	HH	(he bought)	ákábvúnza	HL	(he asked)
ákaténgésá	HHH	(he sold)	ákátárisa	HLL	(he looked)
ákatándánísa	HHHL	(he chased)	ákárégerera	HLLL	(he forgave)

1. Input:

gó + a + ka + verb stem +H(+H(+H(-H))) -H(-H(-H(-H)))
gó + a + ka + verb stem

2. Rule 6:

go + á + ka + verb stem +H(+H(+H(-H))) -H(-H(-H(-H)))
gc + á + ka + verb stem

3. Rule 7:

gc + á + ka + verb stem -H +H(+H(+H(-H))) +H -H(-H(-H(-H)))
gc + á + ka + verb stem

4. Rule 1:

-H +H(+H(+H(-H)))	+H +H(-H(-H(-H)))
gc + á + ka + verb stem	gc + á + ka + verb stem

This gives the above 3rd person forms with TC VIII.

5. Rule 8:

+H +H(+H(+H(-H)))	+H +H(-H(-H(-H)))
gc + à + ka + verb stem	gc + à + ka + verb stem

6. Rule 1; [1]

+H -H(-H(-H(-H)))	+H +H(-H(-H(-H)))
gc + à + ka + verb stem	gc + à + ka + verb stem

This gives the above 1st and 2nd person forms with TC VI.

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[1] Rule 1 cannot apply to the low stems as it has already applied to these forms (stage 4) and cannot be applied to its own output.

APPENDIX III

INDEX TO MORPHOPHONEMIC RULES

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