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SHONA VERBAL TONES

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This paper presents a conditioned variant analysis of the tones on 29 of the most common Shona verbal inflections. After some discussion of perhaps the most detailed previous analysis of Shona verbal tones, that of Fivaz [1970], a summary of the verbal morphology is given. The tonal patterns on the base are then described, followed by those on the pre-base elements. The interaction between the base and the pre-base elements is discussed at length, since it is suggested here that the latter "programme" certain patterns on the former. The effect of the object substitute on the verbal patterns is then described, and some possible advantages of the approach outlined here are mentioned, not least of which is conciseness of description, seen in the checklist of inflections which ends the article.

0. Introduction

Shona (Chishona) is the name given to a cluster of Bantu dialects spoken mostly in Zimbabwe. This paper[1] presents an analysis of the tones on 29 of the most common Shona verbal inflections, both with and without object substitute. The dialect from which the main body of data is taken is Zezuru, spoken around Salisbury, but reference is also made to other dialects, mostly Manyika, spoken in the east of the country.[2] The method of description

[1]My greatest debt of thanks goes to Dr. J.H. Carter for her searching, but always helpful, comments on previous drafts of this paper, which was originally inspired by Dr. D. Fivaz' thesis on Shona morphophonemics (Fivaz [1970] - see also Section 1). I must also acknowledge my gratitude to the Department of Education for Northern Ireland, since it was during the tenure of one of their postgraduate scholarships that I was able to complete the writing of this paper. Thanks to my mother as well, for fine typing from a messy manuscript.

[2]My sources for the data are listed in the bibliography. The basis for the analysis was the data in the grammar section of Carter and Kahari [1974].

adopted here is a type of conditioned variant analysis, in which certain verbal elements "programme"[3] various rules which determine the tone pattern of the verbal base, and in some cases condition tonal realisations elsewhere in the inflection.

1. Fivaz' Analysis

Several other analyses of Shona tones have been proposed, e.g. van Spaandonck [1967], but perhaps the most detailed is that of Fivaz [1970]. This is a taxonomic constituent structure analysis, i.e. the data is described in terms of morphemes which are related to their phonetic realisations by morphophonemic rules (p. xxi). However, Fivaz himself states that there are several problems in this approach and provides a transformational-generative analysis of verbal tones (Appendix II) by way of contrast. The author emphasizes that the interpretation of tonal patterning is of great importance (p.13), but "the main difficulty is that of determining the morphemes that must be recognized in an utterance .... Are the various different tone sequences 'allos' (i.e. conditioned variants) or 'emes' (i.e. contrastive tonal morphemes)?" (p.14).

1.1. Fivaz' approach. For most of the data he adopts the allomorphic approach, though he notes (fn. p.15) that for some examples "the best way of describing these variations is not in terms of allomorphs but in terms of 'adjustments' to base forms". Where verbal tones are concerned he resorts to the device of "conjugational morphemes", i.e. morphemes whose realisation is purely tonal and to which the base tones are assigned (p.25). He admits that this

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The data in Fortune [in press] and in Fivaz [1970] was used to expand on this, and the dialectal variants described in Stevick [1965] were noted in the analysis where possible, though no sustained attempt was made to work all variants into the analysis as formulated here.

[3]The term "programme" implies that a pre-base element may specify a certain tone-pattern on the base: if there is a change in the status of the pre-base element, e.g. by addition of the features [+third person] or [+participial] (see sections 5.1 and 5.2), or a change in the combination of the pre-base elements, e.g. by addition of an object substitute (see sections 8 and 9), then there is a resultant direct change in the pattern on the base.

> is unsatisfactory for three reasons: (a) Eleven ('ten' on p.139) such morphemes must be recognised, but it is impossible to attribute any sort of consistent "meaning" to these forms. There are also no verb forms which contrast solely on the basis of these morphemes. In what sense are they then "morphemic"?... (b) ... there is considerable overlap between the various tonal morphemes ... In what sense are these morphemes 'contrastive'? ... (c) ... If the different tone-sequences are ***dependent*** on [the tone-class of the radical, the pre-base elements, the mood of the inflection] then they cannot be realisations of various morphemes, which are, by definition, contrastive (pp.34-5).

1.2. Fivaz and autonomous tonal grammar. Fivaz also gives some consideration to "autonomous tonal grammar" (cf. Cole [1969]), i.e. "the possibility of assigning all tonal sequences to morphemes whose realisation is only tonal" (p.16). But in Appendix I he gives reasons against such an approach and concludes that it would be both "theoretically unjustifiable and empirically unsupported".

1.3. Fivaz and conditioned variant analysis. As for conditioned variant analyses, he says that his interpretation of the base tones as tonal replacive morphemes "is clearly the simplest taxonomic treatment, as the alternative analysis, that of treating the different sequences as conditioned variants, requires a morphophonemic statement of extreme complexity" (p.21). He reiterates that this "would require complex distributional statements in terms of morphological and syntactic features" (p.34). Yet on p.35 he admits that base tones seem to be conditioned "in a rather complex and perhaps unusual way" by other features in the verbal inflection. We might note, however, that a conditioned variant analysis would have none of the drawbacks he himself cites with regard to the conjugational morpheme approach. I also hope to demonstrate to some extent in this paper that for at least some areas of the verbal system a conditioned variant analysis is not quite as complex as might appear at first sight. For example, Fivaz believes that conflation of base patterns l/hl/hlh/hhlh and h/hl/hlh/hhlh "would require complex conditioning statements" (fn. 3, p.142), with the same comment as regards conflation of l/lh/lhl/lhhl and h/lh/lhl/lhhl (fn., p.144). But, as I will try to show in section 11, these four variants can be handled by two adjustment rules together with, for the dialect in this paper at least, a fairly

simple statement of distribution.[4]

2. Shona Verbal Inflections

2.1. Outline of inflectional pattern. We may say that Shona verbal inflections have the following pattern:

$$\left.\begin{matrix}\pm\text{hort.}\\ \pm\text{neg.}\end{matrix}\right\} \text{ +SP } \pm \text{ neg. + TM } \pm \text{ neg. + VI } \pm \text{ OS + R } \pm \text{ ext. + TV}$$

(where hort. = hortative element; neg. = negative element; SP = subject prefix; TM = tense marker; VI = verbal infix; OS = object substitute; R = radical; ext. = verbal extension; TV = terminal vowel)

However, the sequence .... + TM is replaced in the infinitive by ku- (the class 15 nominal prefix), in the imperative by zero, and in the subjunctive by SP. Overlying this morphological sequence is a tonal pattern, varying with mood and tense, and quite often also with reference to whether the form is third person or first/second person. There are seven tenses (future, near future, present, past of today, past of before today, imperfect, potential) and eight moods, three tense-linked (indicative, relative, participial), occurring on the tenses listed above, and five independent (infinitive, consecutive, imperative, subjunctive, hortative). For glosses and structure of these inflections see section 14.

2.2. Features. Features required for the description are: third person or class [+3] (where an inflection is specified as [-3] it will of course automatically mean that it is first or second person), participial [+part], relative [+rel], subjunctive [+subj], imperative [+imp]. It has been usual to say that, for example, the tone pattern associated with a verbal inflection referring to a third person subject, as against the tone pattern associated with a verbal inflection referring to a first/second person subject, is conditioned by the appearance of a third person morpheme. For the purposes of this paper, however, I prefer to say that ***both*** the tone pattern ***and*** the appearance of the third person morpheme are the realisation of a more abstract feature [+3].

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[4]In actual fact, all of Fivaz' data seems to employ the adjustment rule sequence 10,11,7.

3. Classes of Radical

Shona radicals are divided into two distinct classes. We will account for this by saying that one class of radicals has a "determiner" (D) on the first syllable of each radical and will call these D radicals, while the other class of radicals has no such D and will be called "neutral" (N) radicals.[5] We will then have D radicals such as -d_- 'love', -t_or- 'take', -t_enges- 'sell', -b_atsir- 'help', and -k_anganis- 'make a mistake' and N radicals such as -ti 'tell', -bv- 'come from', -end- 'go', -ramb- 'refuse', -taur- 'speak', -takur- 'carry', -nyemwerer- 'smile', and -rondedzer- 'prepare [things] for'. (Determiners are underlined.)

4. Base Patterns

The sequence R ± ext. + TV is called a "base". A number of differing tone patterns may occur on this base, programmed, as mentioned above, by verbal elements elsewhere in the inflection. Nevertheless, it is important to remember that there is a tonological boundary between the base and the other inflectional elements preceding it, even if one of these elements has programmed the pattern on the base. The various base patterns will now be exemplified from inflections, the tonological boundary between the base and the pre-base elements being indicated by a full stop. Tone patterns on these pre-base elements should be disregarded for the time being.

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[5]The concept of determinant and neutral elements was developed by Meeussen (see, for example, Meeussen [1963]) and refined by Carter [1971-2]. In the morphotonemic analysis they proposed, they sought to account for the various tonal patterns of Tonga by positing an underlying distinction in syllable status which was not immediately obvious from an examination of the surface patterns. They suggested a two-way distinction: syllables behaving in a certain way they labelled "determiners" and syllables not behaving in that way they labelled "neutrals". The underlying sequence of determiners and neutrals was related to the surface patterns by a series of realisation rules. There was a broad relationship between surface high tone and underlying determiner, and between surface low tone and underlying neutral, but this was by no means always the case; a sequence determiner-determiner, for example, usually surfaced as high-low. In this article the concept of determiner and neutral has been taken over, though the realisation rules proposed here (see section 6.1) are slightly different from those proposed for Tonga.

4.1. The reference pattern.

Let the reference pattern X be, e.g. consecutive, 'and I loved', etc.

D bases	N bases	D bases	N bases
h	l	ndika.dá	ndika.bva
hh	ll	ndika.tórá	ndika.enda
hhh	lll	ndika.téngésá	ndika.taura
hhhl	llll	ndika.kángánísa	ndika.nyemwerera

(where h is high tone, marked ´ , and l is low tone, unmarked)

The reference pattern occurs automatically on underlying forms.

4.2. Adjustment rules. Other patterns are derived from X by "adjustment rules", and further patterns may be derived from these patterns in turn by the application of other adjustment rules.[6] There seems to be only one instance where the sequence of application of these rules is of importance inside one particular dialect (see section 4.4). However, there is also some evidence that sequence of application may be relevant where dialectal variants are concerned (see the discussion in section 6.5). Otherwise, it seems that the rules should be applied in the order given (with the exception of rules 6 and 7). For a list of the rule sequences actually occurring, see section 14. In the following list of adjustment rules, → is short for "the application of this rule adjusts the pattern on the left to become the pattern on the right", and a number in brackets is short for "the product of the application of the rule with this number to the reference pattern". The words "raise" and "lower" can by definition apply only to syllables which are, respectively, low and high.

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[6]Earlier drafts of this paper described the base patterns in terms of several pairs of patterns occurring respectively on D and N radicals, rather like Fortune's tone conjugations. Although in some ways these were easier to fix in the mind than the present rule sequences, it was felt that deriving the various patterns by rules from one reference pattern would have advantages of descriptive adequacy when comparing data from different dialects, since it is easier to write a new rule or rewrite the existing ones than it is to introduce another tone conjugation, which would in any case probably differ only minimally from the ones already established. See section 14 for examples of dialects applying slightly different rule sequences.

A.R.1: Raise the first syllable of the base.

X →	h	h	e.g.	ndichí.dá	ndichí.bvá
	hh	hl		ndichí.tórá	ndichí.énda
	hhh	hll		ndichí.téngésá	ndichí.táura
	hhhl	hlll		ndichí.kángánísa	ndichí.nyémwerera
				present participial, 'I loving', etc.	
				(some Eastern dialects, according to Stevick [1965])	
(9) →	h	h	e.g.	nda.dá	nda.bvá
	hl	hl		nda.tóra	nda.énda
	hll	hll		nda.téngesa	nda.táura
	hlll	hlll		nda.kánganisa	nda.nyémwerera
				past of today, 'I loved', etc.	

A.R.2: Raise the second syllable of N bases.

(1) →	h	h	e.g.	ndichí.dá	ndichí.bvá
	hh	hh		ndichí.tórá	ndichí.éndá
	hhh	hhl		ndichí.téngésá	ndichí.táúra
	hhhl	hhll		ndichí.kángánísa	ndichí.nyémwérera
				present participial, "I loving', etc.	

A.R.3: Lower the second syllable of disyllabic N bases.

(1)→2→	h	h	e.g.	kumú.dá	kumú.tí
	hh	hl		kumú.tórá	kumú.rámba
	hhh	hhl		kumú.bátsírá	kumú.tákúra
	hhhl	hhll		kumú.kángánísa	kumú.róndédzera
				infinitive +OS, 'to love him', etc.	

A.R.4: Raise all except the first syllable on N bases.

X →	h	l	e.g. plus A.R.7[7]	i.dá*	i.bvá*
	hh	lh		tórá	endá

[7]There are no examples in my data of A.R.'s 4 and 5 without accompanying application of A.R.'s 6 or 7. The inflections given as examples for these

hhh	lhh	téngésá	taúrá
hhhl	lhhh	kángánísa	nyemwérérá
		imperative, 'love!' etc.	
		(* i- is a euphonic vowel prefixed before monosyllabic bases)	

A.R.5: Lower the last syllable of 3/4-syllable N bases.

(4) → h	l	e.g. plus A.R.6[7]	handí.de	handí.bve
hh	lh		handí.tóré	handí.endé
hhh	lhl		handí.téngésé	handí.taúre
hhhl	lhhl		handí.kángánise	handí.nyemwérére
			present negative, 'I do not love', etc.	

A.R.6: Lower monosyllabic bases, e.g. see under A.R.5.

A.R.7: Raise monosyllabic bases, e.g. see under A.R's 4 and 11.

A.R.8: Lower last high of D bases.

(1) → l	h	e.g.	ndí.de	ndí.bvé
hl	hl		ndí.tóre	ndí.énde
hhl	hll		ndí.téngése	ndí.táure
hhll	hlll		ndí.kángánise	ndí.nyémwerere
			subjunctive, 'that I may love', etc.	
			(some dialects - Stevick)	

A.R.9: Lower D bases.

X → l	l	e.g.	ngáa.de	ngáa.bve
ll	ll		ngáa.tore	ngáa.ende
lll	lll		ngáa.tengese	ngáa.taure
llll	llll		ngáa.kanganise	ngáa.nyemwerere
			hortative, 'let him love', etc.	

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two rules, therefore, include the later application of rules 6 or 7. The hypothetical form for i.bvá in A.R.4 would be *i.bva , but application of rule 7 makes this i.bvá ; likewise, the hypothetical form for handí.de in A.R.5 would be *handí.dé , but application of rule 6 makes this handí.de .

A.R.10: Replace X by the pattern lhlh on all bases.

X →				
l	l	e.g.	ndísingamú.de	ndísingamú.ti
lh	lh		ndísingamú.toré	ndísingamú.rambé
lhl	lhl		ndísingamú.batsíre	ndísingamú.takúre
lhlh	lhlh		ndísingamú.kangánisé	ndísingamú.rondédzeré

present negative participial +OS, 'I not loving him', etc. (some Eastern dialects - Stevick [1965])

A.R.11: Bring the first high of A.R.10 into line with the determiner on D bases. Spread the first high over two syllables on 4-syllable bases.

(10) →				
h	l	e.g. plus A.R.7	ácha.dá	ácha.bvá
hl	lh		ácha.tóra	áchá.endá
hlh	lhl		ácha.téngesá	áchá.taúra
hhlh	lhhl		ácha.kángánisá	áchá.nyemwéréra

future participial, 'he being about to love', etc.

A.R.12: Replace the sequence lhhl by lhll, and the sequence lhhh by llhh. (Fivaz' dialect)

e.g. áchá.nyemwéréra (cf. under A.R.11) → áchá.nyemwérera
nyemwérérá (cf. under A.R.4) → nyemwerérá

4.3. Frequency of adjustment rules. Some of these rules, e.g. 4,5, are not all that frequently used, but the others appear in a variety of inflections. Some sequences, such as 1, 2, 3, or 10, 11, 6/7 are very common indeed, the latter occurring on most participials, and both commonly occurring on inflections +OS.

4.4. Adjustment rules and ordering. There is one interesting instance of rule sequence being correlated with the difference between [-3] and [+3]. This occurs in the indicative of the past of today (recent past, see section 14.6).

[-3] applies the rules 9 and then 1 to give the base pattern (cf. under A.R.1).

h	l	$\overset{9}{\rightarrow}$	l	l	$\overset{1}{\rightarrow}$	h	h
hh	ll		ll	ll		hl	hl
hhh	lll		lll	lll		hll	hll
hhhl	llll		llll	llll		hlll	hlll

[+3] applies the rules 1 and 9

h	l	$\overset{1}{\rightarrow}$	h	h	$\overset{9}{\rightarrow}$	l	h
hh	ll		hh	hl		ll	hl
hhh	lll		hhh	hll		lll	hll
hhhl	llll		hhhl	hlll		llll	hlll

For example, *nda.t<u>ó</u>rá 'I took' $\overset{9}{\rightarrow}$ nda.t<u>o</u>ra $\overset{1}{\rightarrow}$ ndat<u>ó</u>ra

*nda.enda 'I went' $\overset{9}{\rightarrow}$ nda.enda $\overset{1}{\rightarrow}$ ndaénda

*<u>á</u>.t<u>ó</u>rá 'he took' $\overset{1}{\rightarrow}$ <u>á</u>.t<u>ó</u>rá $\overset{9}{\rightarrow}$ <u>á</u>t<u>o</u>ra

*<u>á</u>.enda 'he went' $\overset{1}{\rightarrow}$ <u>á</u>.énda $\overset{9}{\rightarrow}$ <u>áé</u>nda

5. Pre-base Elements

Having dealt with the various possible base patterns, we may now move on to the rather more complex field of the pre-base elements, starting with three general comments and then setting out the behaviour and programming potential of the elements themselves.

5.1. The indicative SP. An indicative inflection [+3] always has a determiner on the subject prefix syllable, e.g.

ndich<u>áé</u>nda 'I will go' but <u>á</u>ch<u>áé</u>nda 'he will go'

[-cha- [+3] → -cha- ; cf. section 7]

ndat<u>ó</u>ra 'I took [today]' but <u>á</u>t<u>o</u>ra 'he took [today]'

5.2. The participial SP. An inflection [+part] always has a determiner on the subject prefix syllable (with the exception of inflections containing the present participial element -chi-), e.g.

ndin<u>ó</u>enda 'I go' but [zva-] nd<u>í</u>n<u>ó</u>endá '[when] I go'

[-no- [+part] → -no- ; cf. section 7]

ndak<u>á</u>t<u>o</u>ra 'I took [before today]' but nd<u>á</u>k<u>a</u>t<u>ó</u>ra 'I having taken'

[-a-ka- [+part] → -a-ka- ; cf. section 7]

but

ndichíéndá 'I going', ndichítórá 'I taking'

5.3. The direct relative. A direct relative inflection having the same morphological structure as the indicative [-3] (with the exception of inflections containing the past of today element -a-), e.g.

	ndingátengesa	'I would be able to buy'
and	ángaténgésá	'he would be able to buy'
but	angátengesa	'he who would be able to buy'
	ndaítaura	'I used to speak'
and	áitaura	'he used to speak'
but	aítaura	'he who used to speak'

With the past of today most dialects have a rule change in the relative: where the indicative [-3] has rule sequence 9,1, the direct relative will have sequence 9,1,2, or sometimes sequence 1,2, e.g. Fivaz. (The cluster of rule sequences associated with this tense is a particularly interesting one, cf. section 4.4).

	ndatóra	'I took',	ndaénda	'I went'	- sequence 9,1
but	ndatóra	'I who took',	ndaéndá	'I who went'	- sequence 9,1,2
or	ndatórá	'I who took',	ndaéndá	'I who went'	- sequence 1,2

Some dialects, however, do retain the indicative [-3] sequence 9,1:

ndatóra 'I [who] took', ndaénda 'I [who] went' - sequence 9,1

6. Status of Pre-base Elements

As for the elements themselves, we must remember that there is a tonological boundary between them and the base (see section 4); in the following examples, therefore, tone patterns on the base should be disregarded for the time being. Pre-base elements, which are all taken as being monosyllabic, have four different types of status: they may be determiners (symbolised by underlining), neutral (no marking), post-sensitive (marked by subscript ˄) or radical-sensitive (marked by subscript ↳).

6.1. Realisation of determiners and neutrals. Single elements with a deter-

miner are realised with high tone, whereas single neutral elements are realised with low tone, e.g.

ndí.téngésé 'that I may buy' but ku.taura 'to speak'

Neutral elements before a determiner are also realised with low tone, as is a succession of neutral elements, e.g.

ndinó.tórá 'I take', ndikasa.enda 'and I did not go'

In other words, D → h and N → l. However, a determiner following a determiner is realised with low tone unless it is followed by another determiner, and a neutral element following a determiner has a high ("echo") tone unless it is followed by another determiner. A neutral element following two determiners is realised with low tone. In other words, DD(N) → hl(l); DN(N) → hh(l); DDD → hhh; DND → hlh. Or, more formally, DD → hl /__Ø,__N; DD → hh /__D; DN → hh /__Ø,__N; DN → hl /__D; otherwise D → h, N → l.

áno.tórá 'he takes'
ndísinga.endé 'I not going' [some central dialects]
ásísámu.bátsiré 'he not being about to help him'
ásá.tóré 'that he may not take'
ndísínga.endé 'I not going' [eastern dialects]
ndísisá.taúre 'I not being about to buy'

6.2. The depressor rule. There seem to be two instances of a very restricted "adaptation-rule", which is applied nearer the surface than the other realisation rules described. It occurs only in the imperfect negative and the imperfect participial when they contain an OS and will be referred to as the "depressor-rule", since it states that "the high tone of the element is replaced by low tone when a depressor consonant follows".[8] The elements in question, the OS of the two inflections mentioned, are determiners, but they will be marked with subscript ... to show the application of this rule.

handáimú.tákúra 'I did not use to carry him'

[8]Depressors in Shona are as follows (given in the current official orthography): bh, dh, g, vh, mh, nh, z, zh, zv, j, dy, rw, h, or any consonant cluster containing them.

handáiri.dzívúra 'I did not use to unstopper it'
áimú.bátsírá 'he being used to help him'
áimu.bhádhúrá 'he being used to slap him'

6.3. Post-sensitive elements. "Post-sensitive" elements depend on the *following syllable* for their tonal realisation: if that syllable has high tone, the element has low tone; if it has low tone, the element has high tone. These unassigned elements occur only immediately before the radical, and mostly in participials and inflections +OS.

áká.taúra 'he having spoken'
áka.téngesá 'he having bought'

6.4. Radical-sensitive elements. "Radical-sensitive" elements have low tone when preceding a D radical and high tone when preceding an N radical. Apart from one or two dialectal variants, they occur in Zezuru only in the past of before today, future, and potential tenses [+3].

áka.tórá 'he took'
áká.énda 'he went'

6.5. Elements of ambiguous status. We must note that in certain cases there are only minimal differences in the status of certain elements, i.e. we may have to decide their status on the basis of only one tone in a whole inflectional paradigm. See, for example, the present tense as used in the indirect relative:

-ndínodá	'[when] I love'	-ndínobvá	'[when] I come from'
-ndínotóra	'[when] I take'	-ndínóendá	'[when] I go'
-ndínoténgesá	'[when] I buy'	-ndínótaúra	'[when] I speak'
-ndínokángánisá	'[when] I forget'	-ndínónyemwéréra	'[when] I smile'

It is plain that whether we class the element -no- as -no- or as -no- depends merely on what tone the syllable marked with an asterisk has; if it is low (as in the dialect from which most of the data here is taken) we will have -no- , but if it is high (as in Fivaz' dialect - p.133) we will have -no- . The same phenomenon occurs in other instances.

What are the implications of this? It could, of course, mean that the

description is at fault, when it seems to magnify this very small difference by giving two distinct statuses to the -no- element. Both of these statuses are, moreover, 'secondary' to the basic determiner/neutral distinction. Yet I think we have good reason to welcome such cases as this. Just as base patterns are due to the application of slightly different rule sequences in different dialects, we see here that the behaviour of the pre-base elements likewise depends on very slight differences. This in turn suggests that with more data we may be able to abstract an underlying form for these various types of dissimilation or polarity, which on the surface appear so difficult to reconcile with each other.

In this instance, for example, there is an interesting possibility of describing the data in terms of a type of ordering in the surfacing of the various rules and features, so that we need describe the element -no- only as post-sensitive. The basic adjustment rules applied in this particular inflection (see section 14.1) are 10, 11, and 7 (Fivaz' dialect has the additional rule 12). If we use ps, standing for "post-sensitive", to mean "the element takes tone opposite to that of the succeeding syllable", and the plus sign to indicate "application of the following rule", we can very roughly sketch out two derivations for the -ndinobva form on which the discussion centres (no attempt has been made to reflect different "levels" by different orthographic conventions):

ndi.no.bva + (D → h) → ndí.no.bva + (10) → ndí.no.bva + (11) →

ndí.no.bva
- + (7) → ndí.no.bvá + (ps) → ndínobvá
- + (ps) → ndí.nó.bva + (7) → ndínóbvá (F)

Thus, where A.R.7 is applied *before* the post-sensitive rule, we have -no- appearing as -no̲- (post-sensitive) throughout the whole series, but when A.R.7 is applied *after* the post-sensitive rule, we have -no- appearing as -no̲- (radical-sensitive) throughout the whole series. It would seem, from examination of other inflectional formulae, that it is more usual for all the adjustment rules to be applied at the same stage, but it is interesting that splitting the application into two parts deals so neatly with two dialectal variants, as well as making a connection between two seemingly dif-

ferent types of element behaviour.

This may be a suitable place to draw attention to another instance of an element having two possible statuses. This is in the past of today [-3] +OS (see section 14.6).

ndamúda	'I loved him'	ndamúti	'I told him'
ndamútora	'I took him'	ndamúramba	'I refused him'
ndamúbatsira	'I helped him'	ndamútakura	'I carried him'
ndamúkanganisa	'I forgot him'	ndamúrondedzera	'I prepared [things] for him'

Here we have the choice of classifying the OS as a determiner, or as post-sensitive. When we consider the [-3] form for Eastern dialects (OS), and the [+3] forms (OS), we might wish to describe the OS here as a determiner. But looked at from the point of view of concise classification of OS behaviour in the dialect from which the main body of the data here is taken, we might like to class together the behaviour of the OS before "minority" sequences for +OS inflections (9 (as here) and 4, 5, and 6) and describe the OS as post-sensitive (see section 9.1). We thus have a choice here of how to describe the element in question, but again, this does not necessarily mean that the terms of analysis are ill-founded or unjustified, and in fact it is worth noting that this tense is one in which sequence of rule application is of great importance (see section 4.4 and 5.3).

Taking the comments in this section as a whole, we may speculate whether it might be justifiable to posit some sort of connection between rule ordering and the status of pre-base elements.

7. Programming Potential

It may be useful now, as a summary, to list all the pre-base elements in terms of their "programming potential", that is, the adjustment rule sequences applied to the verbal base when the element in question is present in the inflection. We may distinguish two "series" of pre-base elements - one in which the element may change its status (and consequently its programming potential, i.e. the adjustment rules it programmes) due to the addition of the feature [+3] or [+part], and one in which these features are not added and have therefore no effect on the status of the elements. We may call

the first group Series I and the second group Series II. It should be noted, though, that a few Series II elements, such as -sa- , do have their status altered by other features such as [+imp].

In the following table dialectal variants (listed on different lines, or separated by colons) are given where possible and are noted by a letter in parentheses after the variant. F refers to Fivaz' dialect, E to eastern dialects in Stevick [1965], and S to southern dialects in Stevick [1965]. Other variants given are also from Stevick [1965], but he gives no characterisation of their particular area.

Series I

Citation form	[+3]	[+part]	programmes adjustment rules .... (commonest sequence given first)
-no-			X; 1 (E); 1, 2, 3 (S)
	-no-		X
	-no- (E)		X
	-no- (S)		1, 2, 3
		-no-	10, 11, 7
		-no- (F)	10, 11, 7, 12
-i-			X; 1 (E); 1, 2, 3 (S)
	-i-		X
	-i- (E)		X
	-i- (S)		1, 2, 3
		-i-	X
-cha-			1, 9; 1 (E); 1, 2, 3 (S)
			-cha-/ha-(neg.)___ : 10, 11, 6
	-cha-		1, 2, 3; 1 (F)
	-cha- (E)		X
		-cha-	10, 11, 7
		-cha- (F)	10, 11, 7, 12
			(This behaviour and potential is shared by the elements (-a)-ka- [past of before today] and -nga- [potential])
-a-			9, 1; 1 (E)
			-a- [+rel] : 9, 1, 2; 1, 2 (F) (E)

Citation form	[+3]	[+part]	programmes adjustment rules ....
	-a-		1, 9; 1 (E)
		-a-	10, 11, 6; 10, 11, 7, 12 (F), 10 (some E)
-o-			1, 9; 1 (E) [note: [+3] forms do not differ from [-3] (citation) forms]
		[-o-]	10, 11, 6; 10, 11, 7, 12 (F)

Series II

Citation form	programmes adjustment rules ....
ku-	X
-ka-	X
-chi-	1, 2; 1
nga/ha-	9 + assignment of D to the SP; 1, 8
[+imp]	4, 7; 4, 7, 12 (F)
	[+imp] + -sa- : 1, 2; 1
[+subj]	1, 2 + assignment of D to the SP; 1, 8 + assignment of D to the SP
	[+subj] + -sa- (some dialects) : 1, 2, 3
-sa-	does not programme, i.e. does not alter patterns already programmed by another element
	-sa- [+imp] → -sa-
	-sa- [+subj] → -sa- (some dialects)
ha-	4, 5, 6 + assignment of D to the SP; 4 + assignment of D to the SP
	ha- / ___ -i- : X
	ha- / ___ -cha- : 10, 11, 6; 10, 11, 7, 12 (F)

Most of these elements and sequences have been exemplified in preceding sections, but to clarify what is meant, we can examine two elements, -no- and nga-/ha- , in greater detail, using the trisyllabic bases -tengesa 'buy' and -takura 'carry'.

7.1. The present tense. The present tense element has the [-3] (citation) form -no- , and it programmes the reference pattern X in Zezuru, the dialect from which the main body of data is taken. However, according to data in Stevick [1965], it programmes A.R.1 in eastern dialects and A.R.1,2,3 in

southern dialects. We thus have, for 'I buy' and 'I carry' respectively,

ndinó̲t̲é̲ngésá	ndinó̲takura	Zezuru dialect
ndinó̲t̲é̲ngésá	ndinó̲tákura	eastern dialects
ndinó̲t̲é̲ngésá	ndinó̲tákúra	southern dialects

When the feature [+3] is present, -no- continues to programme X in Zezuru. In the eastern dialects it changes its status from determiner to post-sensitive and programmes X (comparable to Zezuru but differing from its earlier programming potential of A.R.1 when [-3]). In the southern dialects -no- changes its status from determiner to radical-sensitive and programmes A.R.1,2,3 (as it did when [-3]). Thus, for 'he buys' and 'he carries',

á̲no̲t̲é̲ngésá	á̲no̲takura	Zezuru dialects
á̲nó̲t̲é̲ngésá	á̲nó̲takura	eastern dialects
á̲no̲t̲é̲ngésá	á̲nó̲tákúra	southern dialects

It is to be noted that for the D base -tengesa the surface realisation is the same in all three cases. The realisations for the N base -takura are, however, very different. It was considered best to give a tense formulation for both bases in each dialect, in the hope that these formulations can later be related to each other (see section 6.5), rather than give one formulation for D bases throughout the Shona area and another for N bases. Such formulations would, it seems certain, be much more difficult to relate, and would probably make the analysis too complicated.

When the feature [+part] is present, the -no- element changes its status from determiner to post-sensitive in Zezuru and programmes A.R.10,11,7 (a common participial sequence). Insufficient information on the [+part] patterns of eastern and southern dialects is given in Stevick [1965], so we can give no formulation here for these dialects. However, Fivaz' dialect, which usually agrees with Zezuru, here diverges; in his dialect the element changes its status from determiner to radical-sensitive and programmes A.R.10,11,7,12. Thus, for '[when] I buy' and '[when] I carry',

-ndí̲no̲t̲é̲ngesá	-ndí̲nó̲takúra	Zezuru dialect
-ndí̲no̲t̲é̲ngesá	-ndí̲nó̲takúra	Fivaz' dialect

In this case the two realisations are the same, showing that the differences are very slight between the two dialects, and that we may be able to reduce -no- and -no- to one underlying form (see section 6.5). N bases of a different length do, however, show a difference in realisation:

-ndíno͡bvá	-ndíno͡nyemwéréra	Zezuru dialect
-ndíno↳bvá	-ndíno↳nyemwérera	Fivaz' dialect
'[when] I come from'	'[when] I smile'	

7.2. The hortative. The hortative element has two possible morphological forms, nga- or ha- . We will use nga- in these examples. In Zezuru, nga- programmes A.R.9 and assigns a determiner to the subject prefix. In another dialect (unspecified) in Stevick [1965], it programmes A.R.1,8 (and does not assign a determiner). Thus, for 'let me buy' and 'let me carry',

ngándítengese	ngándítakure	Zezuru dialect
ngándíténgése	ngándítákure	other dialects

In Zezuru, the negative hortative is formed by the insertion of the negative element -sa- , which does not programme, i.e. does not alter patterns already conditioned. Thus, for 'let me not buy' and 'let me not carry',

ngándísatengese ngándísatakure

7.3. Summary. It is hoped that these examples show how useful the analysis may be in dealing with dialectal variants and how succinctly it may express the patterns of whole inflections. This section has dealt with inflections from the point of view of the pre-base elements and their programming potential. Section 14 gives a fuller listing of inflectional patterns seen as a whole, including pattern behaviour when the inflection contains an object substitute. It is to this latter situation that we will now turn our attention.

8. Base Patterns and Object Substitutes

The insertion of an object substitute into the inflection is accompanied in most cases by the application of new adjustment rules governing the base tones:

(1)	X	is replaced by	1, 2, 3
	1, 2 (-chi-)	" " "	
	1, 9	" " "	
	1, 2, 3	remains	
(2)	9, 1	is replaced by	9
(3)	9	is replaced by	10, 11, 6
	1, 2 ([+subj])	" " "	
	4, 7	" " "	
	10, 11, 7	" " "	
	10, 11, 6	remains	
(4)	4, 5, 6	remains	4, 5, 6
(5)	1	"	1
(6)	4	is replaced by	10, 11

The last two are less common patterns given by Stevick. Two examples will be sufficient to show what is meant here. The feature [+imp] programmes adjustment rules 4 and 7; when, however, an object substitute (OS) is present, the adjustment rules 10, 11 and 6 are applied instead (for the tones on the OS itself, see section 9):

D bases

i.dá	'love!'	→	mú.de	'love him!'
tórá	'take!'	→	mú.tóre	'take him!'
bátsírá	'help!'	→	mú.bátsiré	'help him!'
kángánísa	'forget!'	→	mú.kángánisé	'forget him!'

N bases

i.bvá	'come from!'	[→]	mú.ti	'tell him!'
rambá	'refuse!'	→	mú.rambé	'refuse him!'
takúrá	'carry!'	→	mú.takúre	'carry him!'
rondédzérá	'prepare things for!'	→	mú.rondédzére	'prepare things for him!'

Likewise, the element -cha- [-3] programmes A.R.1,9, but when an OS is present, A.R.1,2,3 apply instead. Thus, for D bases:

ndichá̲da̲	'I will love'	→	ndichá̲mu̲.dá̲	'I will love him'
ndichá̲to̲ra	'I will take'	→	ndichá̲mu̲.tó̲rá	'I will take him'
ndichá̲ba̲tsira	'I will help'	→	ndichá̲mu̲.bá̲tsírá	'I will help him'
ndichá̲ka̲nganisa	'I will forget'	→	ndichá̲mu̲.ká̲ngánísa	'I will forget him'

9. Behaviour of the Object Substitute

An OS occurring before the base pattern assembled by the application of these new adjustment rule sequences exhibits the following tonal behaviour.[9]

9.1. Before sequences 9 and 4, 5, 6. An OS occurring with the sequence 9 or with the sequence 4, 5, 6 is post-sensitive, e.g. ndamú̲takura 'I carried him', ndamú̲ba̲tsira 'I helped him' [sequence 9]; ha̲á̲mú̲takúre 'he is not carrying him', ha̲á̲mu̲bá̲tsíré 'he is not helping him' [sequence 4, 5, 6].

9.2. Before sequence 1, 2, 3. An OS occurring with the sequence 1, 2, 3 is a determiner, e.g. ndó̲mu̲bá̲tsírá 'I will soon help him', ndó̲mu̲tákúra 'I will soon carry him'. The depressor rule (see section 6.2) applies (i) when the OS is preceded by the element -i̲- , i.e. the element -i̲- with feature [+part] (see sections 7 and 10 (ii)); (ii) when the OS is preceded by the element -i̲- co-occurring with the negative element ha- (see section 10 (i)). For examples see section 6.2. ***But*** it is neutral when preceded by the element -no̲- with feature [-3], e.g. ndinó̲mú̲bá̲tsírá 'I am helping him', ndinó̲mú̲tákúra 'I am carrying him'.

9.3. Before sequence 10, 11, 6. An OS occurring with the sequence 10, 11, 6 is post-sensitive, e.g. ndí̲mu̲bá̲tsiré 'that I may help him', ndí̲mú̲takúre 'that I may carry him'. ***But*** it is a determiner (i) when the feature [+imp] is present, e.g. mú̲bá̲tsiré 'help him!', mú̲takúre 'carry him!', or (ii) when preceded by the element -no̲- (i.e. the element -no̲- with feature [+part]—see also section 10 (ii)), e.g. zva-ndí̲nomú̲bá̲tsirá 'when - I am helping him', zva-ndí̲nomú̲takúra 'when - I am carrying him'. (These inflections are in fact indirect relatives, which take participial tone patterns; the entity zva- is a relative prefix of class 8, commonly used to refer to

[9]Note that the boundary between the base and the pre-base elements (see section 4) still exists.

time.)

9.4. Summary. We may therefore say that the occurrence of an OS in an inflection is accompanied by the application of new adjustment rules, and that these new sequences in turn decide what tonological status the OS syllable will have.[10]

10. Pre-base Elements and Object Substitutes

But the occurrence of the OS also has repercussions on the status of the pre-base elements, as was implied several times above. The presence of an OS neutralises

(i) the second of two preceding determiners (cf. section 9.2 (ii)):

	handáitakura	'I did not use to carry'
but	handáimútákúra	'I did not use to carry him'
	ánotakura	'he is carrying'
but	ánomútákúra	'he is carrying him'

(ii) a preceding post-sensitive element (cf. section 9.3 (ii), 9.2 (i)):

	zva-ndínobátsirá	'when - I am helping'
but	zva-ndínomúbátsirá	'when - I am helping him'
	áibátsírá	'he being used to help'
but	áimúbátsírá	'he being used to help him'

---

[10]No attempt has been made to accommodate in this formulation the dialectal variants listed in section 14; this does not seem worthwhile until we have more information on them. In the meantime, here is a summary of the OS status in these variants:

before rule sequence...	OS status	co-occurring with elements...
10, 11, 6	OS	ha- (C)
	OS	-cha- [+part] (?)
1	OS	-chi- (E), -a- [+3] (E), [+subj] neg. (E)
	OS	-a- [-3] (E), -chi- (C), -a- [+3] (C), [+subj] neg. (C), -ka- (?)
	OS	-no- (C), -i- (C)
4	OS	ha- (E)
1, 9, 6	OS	ku- (C)

ndíchabátsirá 'I being about to help'
but ndíchámubátsirá 'I being about to help him'

(iii) a preceding radical-sensitive element:

ákátákúra 'he carried'
ákamútákúra 'he carried him'

11. Rule Distribution and Sequence

It is, of course, impossible to say *why* a dialect uses a certain rule or sequence of rules, since the "rules" are not there waiting to be discovered but are merely abstractions we have made from the body of data. Nevertheless, it is conceivable that they may be of some use in describing dialect differentiation (see section 13.2); even for individual dialects it may be possible to make some statements about rule distribution.

For example, in the dialect from which most of this data is taken the rule sequence 10, 11 is followed by rule 6 on some occasions and rule 7 in others. From an examination of these occurrences, we can state that the sequence 10, 11, 6 is the usual one, exemplified by such inflections as the following:

recent past participial

áda 'he having loved'
ábva 'he having come from'

subjunctive + OS

ndímúde 'that I may love her'
ndímúti 'that I may tell him'

future participial + OS

áchámúda 'he being about to love her'
áchámúti 'he being about to tell him'

However, the sequence 10, 11, 7 occurs in (i) the subjunctive negative +OS e.g. ndísámudé 'that I may not love her', ndísámutí 'that I may not tell him' (contrast second example above); (ii) the future participial -OS, e.g.

ákhadá 'he being about to love', áchatí 'he being about to say' (contrast third example above); (iii) the present participial -OS, e.g. zvandínǫdá 'when I love', zvandínǫbvá 'when I come from'. We might say that where rule 6 is concerned D radicals are temporarily shifted into the N radical class and that when rule 7 applies the opposite occurs, i.e. N radicals behave as D radicals.

12. Inflections not Described Here

No description is given in this analysis of compound or periphrastic tenses, nor of negative inflections containing the element -si- . The latter seem to be the only major area in verbal inflections where this analysis cannot be so readily applied, mainly because of the complex behaviour of the element -si- but also because in one case (the present/potential negative relative +OS) there seems to be a [-3]/[+3] distinction introduced in the inflection +OS where none existed in the inflection -OS, which has in other cases been taken to be the base form. Using the conventions outlined in section 14, we can describe the patterns as follows.

present/potential negative

relative:		behaviour of elements
F-si-ngá-10,11,6-e	1. F-si-nga-OS-10,11,6-e	DP → DND
	3. F-si-nga-OS-10,11,6-e	↘ DDD
F-si-nga-10,11,7,12-e (F)		(where D = determiner,
F-si-nga-10,11-e (C)		N = neutral, P = post-
F-si-nga-4-e (E)		sensitive)
participial:		
F-si-nga-10,11,6-e	F-si-nga-OS-10,11,6-e	ND → DDP
F-si-nga-4-e (C)	F-si-nga-OS-10,11,6-e (C)	DN → DND
F-si-nga-10,11-e (E)	F-si-nga-OS-10-e (E)	NN → DND

future negative

relative:		
F-si-sá-10,11,6-e	F-si-sa-OS-10,11,6-e	DP → NDP
F-si-sá-10,11,7,12-e (F)		
participial:		
F-si-sa-10,11,6-e	F-si-sa-OS-10,11,6-e	ND → DDP

Although some patterns can be discerned here, e.g. the sequence of elements neutral-determiner in the inflection -OS being replaced by the sequence determiner-determiner-post-sensitive in the inflection +OS, we can make hardly any generalisations, since we have opposing cases,(e.g. the sequence determiner-post-sensitive replaced by determiner-neutral-determiner *or* determiner-determiner-determiner *or* neutral-determiner-post-sensitive) which are too complex to permit formulation of useful rules. In the meantime, I merely list the information.

In an earlier draft of this paper it was attempted to derive the negative inflections from the affirmative inflections, e.g. the negative inflections +OS being derived from the affirmative inflections +OS and not from the negative inflections -OS. However, the formulations were still a great deal more complex than those required in the rest of the analysis.

13. Advantages of the Analysis

In the final part of the article I would like to mention what I feel are some of the advantages of the approach outlined above, farrago though it is of TG-type rules, the determiner/neutral distinction developed for Tonga in Meeussen [1963] and employed to good effect in Carter [1971,1972], and conditioned variant theory. There are, of course, areas where the present approach is difficult to apply (see section 12), but I believe that on balance it is fairly useful.

13.1. Predictive power and descriptive adequacy. Apart from the general comments we can make about person and mood (see section 5), we can give some idea of recurrences of behaviour in elements, so that the various types of dissimilation (i.e. tone polar to the preceding syllable, tone polar to the succeeding syllable, tone polar to the class of the verb radical) exhibited by some elements can be discussed, related, and worked into the general description. Since some attempt is made to state when and where this behaviour occurs, we achieve something more than a listing of the data; since the emphasis is on the relationships between the various inflectional elements, we can emphasise the interaction of these elements in the verbal system. Moreover, the approach is fairly easy to state and describe as opposed to some rule-based analyses, and the end result (see section 14) is very concise,

since a whole inflectional pattern can be described in one line. This might conceivably have some pedagogical value, but in any event, it makes inflections much easier to compare; it means, for example, that it is possible to state fairly succinctly the variant features of a particular inflectional cluster (see sections 4.4 and 5.3). Further, an explicit relationship is drawn between the tonal features of inflections without object substitute and those with object substitute. I do not, of course, mean to imply that no other approach has these features, but merely that the one I have outlined treats them, I believe, in a reasonably concise and elegant way.

13.2. Rule maps. Lastly, since the approach can be applied to various dialects, it might be possible to build up "rule maps" giving the areas in which a certain sequence is used for a particular inflection. Likewise, since the status of elements sometimes depends on what are rather minimal differences (see section 6.5), mapping of the behaviour of elements in several dialects could give more information both on this behaviour and also the relationship between the various statuses. All this would mean that the tonal aspects of verbal inflections could be fully discussed in dialect comparison in the way that the segmental features are. With a number of maps, it may be that certain patterns in sequence or status distribution would become apparent and that these in turn might help us gain a clearer picture of inter-dialectal relationships, i.e. degrees of relatedness, influence of one dialect on another, overlapping or infringement of one dialectal area by another dialect, and so on.

14. Checklist of Inflections

A checklist of the inflections the analysis was applied to now follows. This shows the patterns of a much wider range of inflections than it was possible to exemplify in the article. It is, I believe, the most concise direct representation yet formulated of so many Shona tenses and dialectal variants, and forms a good basis for further study and comparison of Shona verbal patterns.

Abbreviations are as follows: ind. (indicative), rel. (relative), part. (participial), aff. (affirmative), neg. (negative), F (full subject prefix), C (contracted subject prefix), OS (object substitute), 1. (first/second per-

son), 3. (third person), (F) (Fivaz' dialect), (E) (Stevick, eastern dialects), (C) (Stevick, central dialects), (S) (Stevick, southern dialects). Other variants not so marked are from Stevick as well, but he does not characterise them as belonging to any particular dialect. General tense glosses are given in the aff. ind. 3, using the verb 'go'. The rule sequences are placed in the position occupied by the radical in the inflection.

(1) Present: 'he goes/will go'

aff. ind.

1.	F-no-X-a	F-no-OS-1,2,3-a
	F-no-1-a (E)	F-no-OS-1-a (C)
	F-no-1,2,3-a (S)	
3.	F-no-X-a	F-no-OS-1,2,3-a
	F-no-X-a (E)	
	F-no-1,2,3-a (S)	

part.

	F-chi-1,2-a	F-chi-OS-1,2,3-a
	F-chi-1-a	F-chi-OS-1-a (C)
		F-chi-OS-1-a (E)
	-F-no-10,11,7-a	-F-no-OS-10,11,6-a [as used in the indirect relative]
	-F-no-10,11,7,12-a (F)	

neg. ind.

ha-F-4,5,6-e	ha-F-OS-4,5,6-e
ha-F-4-e	ha-F-OS-10,11-e (C)
	ha-F-OS-4-e (E)

(2) Imperfect: 'he used to go/would go'

aff. ind.

1.	Ca-i-X-a	Ca-i-OS-1,2,3-a
	Ca-i-1-a (E)	Ca-i-OS-1-a (C)
	Ca-i-1,2,3-a (S)	
3.	Ca-i-X-a	Ca-i-OS-1,2,3-a
	Ca-i-X-a (E)	
	Ca-i-1,2,3-a (S)	

part.

Ca-i-X-a	Ca-i-OS-1,2,3-a

neg. ind.

ha-Ca-i-X-a	ha-Ca-i-OS-1,2,3-a

(3) Future: 'he will go'

aff. ind.

1. F-cha-1,9-a	F-cha-OS-1,2,3-a
F-cha-1-a (E)	
F-cha-1,2,3-a (S)	
3. F-cha-1,2,3-a	F-cha-OS-1,2,3-a
F-cha-1-a (F)	
F-cha-X-a (E)	

part.

F-cha-10,11,7-a	F-cha-OS-10,11,6-a
F-cha-10,11,7,12-a (F)	
	F-cha-OS-10,11-a

neg. ind.

ha-F-cha-10,11,6-a	ha-F-cha-OS-10,11,6-a
ha-F-cha-10,11,7,12-a (F)	

(4) Remote Past: 'he went (before today)'

as for (3) aff., replacing the sequence F-cha- with Ca-ka-

(5) Potential: 'he can go/may go'

as for (3), replacing -cha- with -nga-

(6) Recent Past: 'he went (today)'

aff. ind.

1. Ca-9,1-a	Ca-OS-9-a
Ca-1-a (E)	Ca-OS-1-a (E)
3. Ca-1,9-a	Ca-OS-1,2,3-a
Ca-1-a (E)	Ca-OS-1-a (E)
	Ca-OS-1-a (C)

rel.

Ca-9,1,2-a

Ca-1,2-a (F) (E)

part.

Ca-10,11,6-a — Ca-OS-10,11,6

Ca-10,11,7,12-a (F)

Ca-10-a (some E)

(7) Near Future: 'he will soon go/is about to go'

aff. ind.

Co-1,9-a — Co-OS-1,2,3-a

Co-1-a (E)

part.

Co-10,11,6-a — Co-OS-10,11,6-a

Co-10,11,7,12-a (F)

(8) Infinitive: 'to go'

aff.

ku-X-a — ku-OS-1,2,3-a

ku-OS-1,9,6-a (C)

neg.

ku-sa-X-a — ku-sa-OS-1,2,3-a

(9) Consecutive: 'and he went'

aff.

F-ka-X-a — F-ka-OS-1,2,3-a

F-ka-OS-1-a

neg.

F-ka-sa-X-a — F-ka-sa-OS-1,2,3-a

(10) Imperative: 'go!'

aff.

4,7-a — OS-10,11,6-a

4,7,12-a (F)

neg.

F-sa-1,2-e
F-sa-1-e
F-sa-OS-1,2,3-e

(11) Subjunctive: 'that he may go'

aff.

F-1,2-e
F-1,8-e
F-OS-10,11,6-e

neg.

F-sa-1,2-e
F-sa-1,2,3-e
F-sa-OS-10,11,7-e
F-sa-OS-1-e (C)
F-sa-OS-1-e (E)

(12) Hortative: 'let him go!'

aff.

nga-/ha-F-9-e
nga-F-1,8-e
nga-/ha-F-OS-10,11,6-e

neg.

nga/ha-F-sa-9-e

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