Serialization Patterns in Shona Verbal Morphology[1]

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1.0 Problem

Shona is a Central Bantu language that has been classified as an SVO language (Comrie 1981). As with other Bantu languages, however, Shona has SOV characteristics reflected in its morphology. This is not surprising since morphology often reflects earlier word order patterns and Proto-Bantu has been reconstructed as SOV (Givón 1975). This paper focusses on Shona verbal morphology, particularly on the serialization of [valence] [aspect] [tense].[2]

Valence can be analysed in both semantic and syntactic terms.[3] Semantically, a verb is modified according to the affix attached; for example, the meaning of the simple verb changes to causative with the suffix expressing causation. Syntactically, valence has implications for the arguments that the verb takes; for example the applied suffix produces a ditransitive verb, which means the applied valence has two arguments. In some instance suffixes in Shona, such as the neuter valence, produce intransitive verbs, thus taking no arguments.[4]

In Shona, the verb is preceded by the tense (TNS) marker, and in cases where both aspect (ASP) and tense markers occur, tense is located closest to the verb root. The valence (VAL) category is found in postverbal position immediately following the verb root.

(1) Shona

ndi -no-set-sa	vafundi
SUB-TNS-VRT-VAL	OBJ
I-amuse	students
'I amuse the students'	

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[1] I am very grateful to Robert W. Murray for his valuable comments and suggestions. For the complete version of this paper see Bellusci (1991).

[2] The categories enclosed in square brackets indicate free lexical items.

[3] There are twelve valencies in Shona; the valence category being examined in this paper is the causative.

[4] Lyons (1977:486ff.) points out that predication in terms of arguments suggests that a predicator with one argument has a valency of 1 (intransitive verb); a predicator with two arguments has a valency of 2 (transitive verb); and a predicator with three arguments has a valency of 3 (ditransitive verb).

(2) nd-a-i-ka[5]-set-sa vafundi
SUB-(ASP) -ASP-TNS-VRT-VAL OBJ
he-used to-amuse students
'I used to amuse the students

(3) nd-a[6]-ka-set-sa vafundi
SUB-(ASP)-TNS-VRT-VAL OBJ
I-amused students
'I amused the students'

The [aspect-tense][7] combinations of (2) and (3) appear in Shona as shown in (4) with both the perfective and habitual markers preceding the tense:[8]

(4)

$$\begin{Bmatrix} \text{a-} \\ \text{i-} \end{Bmatrix} \text{ka-}$$

The serialization of [aspect-tense] and verb root, however, appears to contradict Bybee's proposed universals (1985) based on the following semantic hierarchy:

(5) **Semantic Hierarchy**

VERB ROOT

category

high — *degree of relevance* — *low*

VALENCE
VOICE
ASPECT
TENSE
MOOD
NUMBER AGREEMENT
PERSON AGREEMENT
GENDER AGREEMENT

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[5] The aspectual construction with **ka-** is a variation of the past habitual; in standard Shona the **ka-** marking the past habitual is commonly deleted.

[6] The aspectual marker **a-** loses its perfective meaning in constructions with **ka-**; however, **a-** signifies the perfective when it appears without **ka-**, as in **nd-a-enda** 'I have gone'.

[7] The two categories enclosed in square brackets indicate univerbation between the two.

[8] My thanks to Karikoga Bamhare for checking and correcting the Shona data.

According to Bybee, this hierarchy will be directly manifested through the serialization of morphological markers as follows:

(6)
i (VERB ROOT) VALENCE VOICE ASPECT TENSE MOOD AGREEMENT (N / P / G)
or
ii AGREEMENT (N / P / G) MOOD TENSE ASPECT VOICE VALENCE (VERB ROOT)

As evident in (1) to (3), however, Shona departs from Bybee's categorial serialization with respect to aspect and tense; moreover, Shona shows the [aspect-tense] categories in preverbal position, while valence remains postverbal. We face two possibilities: (a) Bybee's hierarchy is inadequate and should be rejected; or (b) an explanation of the discrepancy must be provided which is coherent with the hierarchy. This paper attempts to explain the discrepancy between Shona serialization, and the serialization expected on the basis of Bybee's semantic hierarchy.

Before turning to our problem in detail, I would like to briefly discuss the basis of Bybee's semantic hierarchy. Bybee (p.24) maintains that the iconicity of linguistic expression is evident by the proximity of the verbal categories to the verb root, and predicts that categories that are more relevant will have greater morphophonemic impact on the verb root than categories that are less relevant. While serialization provides evidence for the semantic hierarchy that Bybee proposes, language acquisition as well, supports the semantic hierarchy.

A child language acquisition study conducted by Brown (1973) indicates how morphemes with greater saliency are acquired before morphemes whose meanings are not identifiable: aspect as *-ing* is acquired before tense as in *-ed*, while person agreement *-s*, is acquired after aspect and tense.

In another study, morphological categories reflecting the semantic hierarchy proposed by Bybee are illustrated in Brazilian Portuguese. In Brazilian Portuguese the child uses the 3SG present at first to express all functions, and then acquires the 3SG preterite which is extended to all persons (Bybee 1985:59-60). The 1SG present and 1SG preterite are built from the 3SG with the present being acquired before the preterite. This indicates that tense/aspectual distinctions are made first, with agreement distinctions following, and the same process of acquisition applies to the imperfect:

(7) Brazilian Portuguese

ASPECT	3SG > 1SG	
present	1SG	abro
	2/3SG	abre
preterite	1SG	abri
	2/3SG	abriu

Evidence from language studies, therefore, supports the hierarchy proposed by Bybee: the acquisition of verbal categories reflects a semantic hierarchy as shown with aspect, tense and agreement.

2.0 Specification: Pre- and Post-

The conflict between serialization of verbal categories expected on the basis of the semantic hierarchy and the serialization evident in Shona should be considered in the light of pre- and postspecification. Claims relating to specification have been largely influenced by the research of Lehmann (1973), Vennemann (1974), Comrie (1981), Hawkins (1983), and Bybee (1985). Characteristics of word order associated with specification had been noted as early as 1782 by Adelung. He observed that German syntax of that period placed specifying elements before the specified. Specification patterns had also been recorded by Voretzsch and Rohlfs in 1901 maintaining that in Vulgar Latin "the governing word tended to precede the governed one" ([1901] 1966:139). Regula, in 1966, observed that Modern French had the *déterminant*, the determining word, follow the *déterminé*, the determined one. Vennemann expresses this relationship as operand-operator in the case of verb-object (VO) languages, and operator-operand in the case of object-verb (OV) languages (Vennemann 1974; Comrie 1981). The operator-operand relationship is also referred to as specifier-specified. In specifier-specified relationships Vennemann gives the following assignment:

(8)

specifier	*specified*
OBJECT	VERB
ADJECTIVE	NOMINAL
GENITIVE	NOMINAL
RELATIVE CLAUSE	NOMINAL
NOMINAL PHRASE	ADPOSITION
STANDARD OF COMPARISON	COMPARATIVE ADJECTIVE
MAIN VERB	AUXILIARY
ADVERB	VERB

Example (8) also appears in reverse order with the *specified* column preceding the *specifier* column. Vennemann distinguishes two extreme word order types: consistently prespecifying languages where the specification is always specifier-specified, and consistently postspecifying where the specification is always specified-specifier. The OV or VO word order appears to be primary, while other word order patterns are secondary, in which the following is subsumed:

(9) Principle of Natural Serialization

The preference for a unidirectional word order in which either a specifier-specified or specified-specifier relationship is maintained.

The specification of VO or OV is seen as basic: VO produces a pattern of postspecification, and OV shows a pattern of prespecification. The more consistent the order of specification, the more the pre- or postspecification word order is preferred. Examples of specification are evident in word order typology, such as Hindi, which reflects consistent prespecification, and Thai, whichs reflects consistent postspecification:[9]

Hindi

(10) OBJ-VRB

aurat **sabji** **banati hai**
SUB **OBJ** **VRB**
woman vegetables cook
'the woman cooks vegetables'

(11) ADJ-NOM

bada **adami** sharab peeta hai
ADJ NOM (SUB) NOM (OBJ) VRB
big man alcohol drinks
'the big man drinks beer'

(12) GEN-NOM

bachon **ki** **kitaben**
NOM VRB (**POS**) **NOM**
children belong books
'the childrens' books'

(13) REL-NOM

khelti **hui** **ladkiyon** ko dekho
VRB **REL** **NOM** VRB
playing girls look
'look at those girls who are playing'

(14) NPH-ADP

ladke **ghar** **me** rah rahe hain
NOM **NPH** **ADP** VRB
boys house in are staying
'the boys are staying in the house'

(15) SCP-CPA

Yamini **Valsamma** se **choti** hai
NOM **SCP** **CPA**
Yamini Valsamma is small
'Yamini is smaller than Valsamma'

(16) MNV-AUX

log **nach-enge**

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[9] I am indebted to Yamini Vijayaraghavan for the Hindi examples, and to Lorraine Shelstad for the Thai.

NOM MNV AUX
people dance will
'the people will dance'

The Hindi examples, (10) to (16) serve to illustrate how the specifiers precede the specified. In contrast, Thai shows VO word order:

Thai

(17) VRB-OBJ

phuuyiŋ **phat** **phak**
SUB **VRB** **OBJ**
woman fries vegetables
'the woman fries vegetables'

(18) NOM-ADJ

phuuchaay khon **yay** dɨ̀m bia
SUB (NOM) CLS **ADJ** VRB OBJ (NOM)
man big drink beer
'the big man drinks beer'

(19) NOM-GEN

naŋsɨ̌ **khɔɔ** nakrian
NOM **GEN** NOM
books of students
'the books of the students'

(20) NOM-REL

duu **dekyiŋ** khoŋ nan **thii** len
VRB **NOM** CLS DEM **REL** VRB
look girl that who play
'look at those girls who are playing'

(21) ADP-NPH

dekchaay yuu **nay** **baan**
NOM VRB **ADP** **NPH**
boys stay in house
'the boys are staying in the house

(22) CPA-SCP

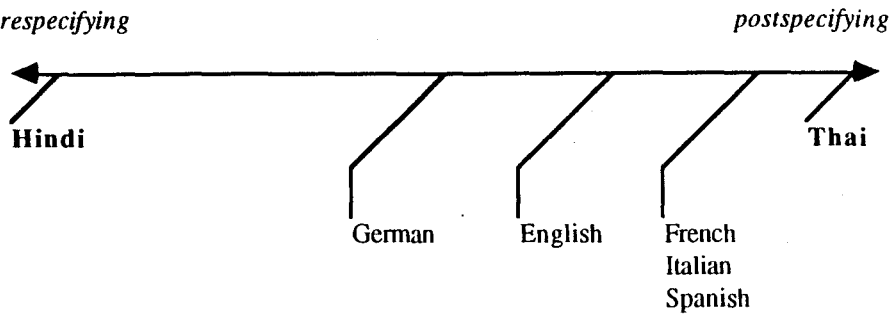
Sawat **lek** kwaa **Charun**
NOM **CPA** than **SCP**
Sawat small than Charun
'Sawat is smaller than Charun'

(23) AUX-MNV

khon **ca** **ram** thii Naan
NOM **AUX** **MNV** NOM
people will dance dance
'the people will dance'

The Thai examples, (17) to (23), have the specifier follow the specified.[10] The prespecifying-postspecifying continuum can be expressed as follows:

(24) **Specification**



We saw with the Hindi data that each example provided a consistent pattern of OV word order, and in some cases was comparable to English and German.

(25) I like to drink sweet coffee.

The English example has characteristics of both word order types since the adjective 'sweet' prespecifies the noun 'coffee' (OV), while the object, 'coffee' follows the verb 'like' (VO). This pattern is in contrast to the German one:

(26) er sagt, daß er süßen Kaffee trinken mag
he says that he sweet coffee to drink like
'he says that he likes to drink sweet coffee'

In the German subordinate construction the verbs are found in final position, and with the prespecification of 'coffee' an OV pattern is evident; however, in main clauses, either the modal appears in second position (27), or the main verbs appear in second position (28):

(27) ich mag süßen Kaffee zu trinken;
I like sweet coffee to drink
'I like to drink sweet coffee'

(28) ich mag süßen Kaffee
I like sweet coffe
'I like sweet coffee'

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[10] In the Thai data /ch/ = palatal affricate, unvoiced and aspirated (18) and (21); and /c/ = palatal affricate unvoiced and unaspirated (23). Tone is not indicated on the Thai data.

In other words, German, like English, shows both prespecification and postspecification but in contrast to English has additional prespecification patterns such as OV serialization in subordinate clauses.

With the Thai data, clear patterns of VO word order were apparent in each of the examples, showing similar constructions with the Romance languages, such as Italian:

(29) io bevo il café dolce
I drink the coffee sweet
'I like to drink sweet coffee'

In the Italian example the specifier of the 'coffee' follows, unlike the English and German, where it precedes; thus, the Italian shows evidence of VO word order with the verb 'drink' in second position. Given the data supporting specification patterns as a result of the Principle of Natural Serialization, we can now examine the Shona data.

2.1 Shona Word Order as Postspecifying

The following examples demonstrate clearly that Shona is a postspecifying language:

(30) VRB-OBJ

mukadzi	**a-no-bika**	**miriwo**
SUB	AGR-TNS-**VRB**	**OBJ**
woman	cook	vegetables

'the woman cooks vegetables'

(31) NOM-ADJ

murume	**mu-kuru**	a-no-nwa	hwahwa
SUB(NOM)	AGR-**ADJ**	AGR-TNS-VRB	OBJ
man	big	drink	beer

'the big man drinks beer'

(32) NOM-GEN

mabhuku	a-vafundi
NOM	**GEN-NOM**
books	of-pupils

'the books of the pupils'

(33) NOM-REL

tarisa	**vasikana**	vayo	va-ri	kutamba
VRB	**NOM**	DEM	**REL**-ASP	to-play
look	girls	those	who-are	

'look at those girls who are playing'

(34) ADP-NOM

vasikana	va-ri	kugara	**mu-mba**
NOM	AGR-ASP	to-stay	**ADP-NPH**
boys	are		in-house

'the boys are staying in the house'

(35) CPA-SCP

Ignasiyo	a-ri	mu-**duku**	kuna	**Davhiti**
NOM	AGR-COP	AGR-**CPA**		**SCP**
Ignatius	i s	small		David

'Ignatius is smaller than David'

(36) AUX-MNV

vanhu	va-**cha-tamba**
NOM	AGR-AUX-MNV
people	AGR-will-dance

'the people will dance'

Indeed, Hawkins (1983:277) maintains that almost all Bantu languages have the basic word order:

(37) SVO / PRE / NOM-ADJ / NOM-GEN / NOM-REL

An SVO word order is clearly evident in Shona; however, as with other Bantu languages, Shona's morphology shows quite a different pattern of serialization

2.2 Shona Morphology as Prespecifying

Several areas of Shona morphology reveal patterns of prespecification, in particular cliticized objects and adverbs, as well as nouns and verbs:

(38)

mufundisi	**a-no-va-batsira**
SUB	AGR-TNS-**POB-VRB**
teacher	them-help

'the teacher helps them'

Example (38) shows the verb **-batsira** with both the tense marker and pronominal object preceding the verb root. In Modern Shona, adverbs, as well, show an SOV construction in which the adverb precedes the verb it specifies:

(39) ADV-VRB

nd-a-ka-**swero-funda**
SUB(ASP)-TNS-**ADV-VRB**
I/PST-all day long-study

'I studied all day long'

The adverb in example (39) not only specifies the verb root but the adverb is also a clitic: the adverb in the preverbal position is always affixed to the verb root.

Let us now examine the nature of the nominal morphology of Shona, which can be applied to Bantu nominals in general. Givón maintains that inflexional and derivational bound morphemes derive from historically free lexical morphemes. With the syntax of the language determining the order of these free lexical items, the syntax also determines the morphotactics of the evolving affixal morphology (Givón 1971:409). If we now apply this to Shona we can consider how it relates to the nominal morphology in terms of the Noun Classes. The morphemic nature of the Noun Classes in the Bantu

languages may be a reinterpretation of what had been at an earlier stage free lexical items, as the following Shona examples illustrate:

(40) **mu**-kadzi
NCL-NRT
'woman'

(41) *mu *kadzi
QLF NOM
one human female

Mukadzi 'woman' is composed of a the singular morpheme **mu-** used only for humans, and the noun root **-kadzi** producing 'wife' or 'married woman'. The plural is expressed by replacing **mu-** with **va-**: the Noun Class employed for more than one human. It has been hypothesized that Noun Classes given by Bantu prefixes have characteristic semantic content. Further, evidence indicates that Proto-Bantu noun prefixes maintained a semantic system whereby each prefix was associated with a particular meaning (Denny and Creider 1983:217). Example (40) represents Modern Shona nominal morphology; however, a reconstruction based on Givón's claims produces (41) in which the noun root develops from a nominal, and the Noun Class develops from a qualifier. The position of the qualifier as preceding the noun producing QLF-NOM suggests a frozen morphology of an OV syntax, since prespecification is expected in OV languages. If we contrast this to the present VO word order evident in the postspecification patterns noted, the Noun Classes represent the earlier morphology of Bantu, which implies an earlier OV word order. Such word constructions are supported by both Greenberg (1966) and Givón (1971, 1975) in which OV word order in SOV languages show QLF-NOM nominalization. We can now compare this to other patterns found in the qualificative morphology of Shona.

A feature of Shona verbal morphology is the rich application of affixes giving the verbs new meanings producing a derivational morphology. We have also noted that Givón refers to such suffixes as verbal derivational suffixes or VDS. McCawley (1968) postulates that the lexicalization of causative-transitive verbs, illustrated by the derivation of causative affixes, may historically have risen from a main verb [CAUSE]. We can then analyse the suffixal morphemes as follows:

(42)	fara 'happy'	fa-**dza**	[happy]	+	[CAUSE]	'excite'
(43)	seka 'laugh'	se-**tsa**	[laugh]	+	[CAUSE]	'amuse'
(44)	tenga 'buy'	teng-**esa**	[buy]	+	[CAUSE]	'sell'
(45)	[CAUSE]	--->	[AUX]	--->	[SFX]	
	kuita	*ita	-tsa			
	'to make'	'make'	[CAUSE]			
(46)	**[CAUSE]**	**--->**	**[AUX]**	**--->**	**[SFX]**	

The causative suffix in examples (42) to (44) reveals the same phonological process of assibilation. The verb in Modern Shona 'to make' **kuita** is a good candidate for the present causative suffix with its various allomorphs: the high front vowel followed by the

alveolar palatalized into /s/ ~ /dz/ ~ /ts/. The diachronic process is shown in (45): the position of the verbal causative led way to the development of the auxiliary (46) and eventually a suffix (SFX).

With the derivation developing in postverbal position, the verbal specifier, that is, the verb root, reflected the unidirectional pattern expected in natural serialization. In the case of Proto-Bantu the object preceded the main verb and thus, the main verb preceded the auxiliary. In Modern Bantu languages, the presence of modality suffixes is manifested through a vowel; this vocalic morpheme is reconstructible to Proto-Bantu, and due to the modal's final position, support for Proto-Bantu as SOV is maintained.

In additon to the postverbal affixes modifying the verb to produce a change of meaning, another means of producing such derivatives is through verb initial voicing. Such verb initial changes add an adverbial meaning to the verb such as the following:

(47) kwiza 'rub' ---> gwiza 'rub against'

(48) tepuka 'sway' ---> depuka 'great sway'

The verbs in (47) and (48) have an adverbial meaning with verb initial voicing. The position of sound change suggests a development from prefixal modification; in other words, the qualificative meaning preceding a verb supports a pattern of prespecification. Since adverbs prespecify the verb in OV languages, the voicing of Shona verbs producing an adverbial meaning implies the remnants of a frozen SOV morphology.[11] This preverbal modification further supports an earlier OV morphology since prespecification is once again evident. The examples presented above serve to illustrate how Modern Shona is postspecifying in word order, whereas its morphology betrays traces of prespecification. This is not surprising since Proto-Bantu has been reconstructed as SOV.

2.3 Proto-Bantu as Prespecifying

An analysis of the morphological pattern of prespecification in Shona requires an examination of Proto-Bantu. Such an examination will reveal Shona's morphological origins in Proto-Bantu syntax. Scholars, such as Givón (1971, 1975) and Hyman (1975) have provided evidence to support the SOV structure of Proto-Bantu and its diachronic development into SVO Bantu languages. Givón (1971:394) postulates that the normal syntactic order of the verb phrase in most Bantu languages is VO:

(49) AGR-ATM-POB-VDS[12]

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[11] I am indebted to Robert Murray for this observation.

[12] Note: (i) where Givón uses COMP I use OBJ; (ii) Givón's M, in this case ATM, includes all three: aspect, tense and modal morphemes; (however, while a modal auxiliary may occur in this position, some Bantu moods are expressed only through a suffix, as in Shona -e, on the verb root with no modal auxiliary; Givón's M position can be reanalysed as ASP-TNS/MDD; (iii) the POB (Givón uses OP) refers to an anaphoric object pronoun; (iv) VDS is a

Givón claims that ATM and VDS 'have historically arisen from main verbs dominating sentential complements' (Ibid.). He also argues that main modals operating as modal prefixes is a recent process in Bantu, while the modal suffixes were reduced from modal verbs at a much earlier Proto-Proto-Bantu stage. At the time when the suffixal position of the verbal derivative developed from main verbs, Givón hypothesizes that the syntactic order in Bantu must have been OV.

2.3.1 Evidence from Swahili

Evidence of OV morphology in contrast to VO word order in Shona has been shown in sections 2.1 and 2.2. Patterns of VO word order and OV morphology are currently evident in other Bantu languages, such as Swahili:

(50) **ni-li-ona** **kitabu**
SUB-TNS-**VRB** **OBJ** (NOM)
I-TNS-see book
'I saw the book'

(51) ni-li-**ki**-ona
SUB-TNS-**POB**-see
I-TNS-it-see
'I saw it'

The Swahili examples, as with the previous Shona examples, show the object as a nominal follows the verb (50), while the object as a pronominal is in preverbal position (51). The difference between the position of these two objects in both Swahili and Shona (and other Bantu languages) relates to the historical development of Bantu, as Givón points out. This development is evident by the presence of postverbal and preverbal ATM and VDS affixes, as well as the POB.

In addition to the OV morphology of object pronominals, Swahili shows an interesting case of relativization. While an "attraction principle" causes the relative pronoun to gravitate towards the position adjacent to the head noun, this is not always the case with Swahili (Ibid).[13] In Swahili the verb **amba** 'say' adjacent to the head noun introduces the relative which is then suffixed to **amba**:

(52) mwanamke a-me-pika mboga
woman AGR-ASP-cook vegetables
'the woman has cooked vegetables'

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verbal derivative suffix. I have modified Givón's abbreviations to correspond to those which I have used throughout this paper.

[13] Givón provides examples from Bambara, a Mande language of Niger-Congo (data based on Karen Courtenay's work), as well as Bemba, a language closely related to Shona, to explain this "attraction principle".

(53) mwanamke amba-ye a-me-pika mboga
woman *say-**REL** AGR-ASP-cook vegetables
'the woman who has cooked vegetables'

In the relative construction of (52) we find the relative pronoun -ye 'who' suffixed to the verb introducing the relative, but also separating the relative from the head noun. This is in contrast to the 'attraction principle' expected from relative pronouns. In instances where tense markers are present, the relative pronoun is suffixed to the tense marker:

(54) mwanamke a-li-pika mboga
woman AGR-TNS-cook vegetables
'the woman cooked vegetables'

(55) mwanamke a-li-ye-pika mboga
woman AGR-TNS-**REL**-cook vegetables
'the woman who cooked vegetables'

In example (55) where the past tense is expressed **amba-** is not used; instead, **-ye** follows both the agreement morpheme and the tense marker. The relative pronoun in this case is attached to a tense marker having been historically derived from verbs (Ibid.). Once again, the separation between head noun and the relative pronoun is not expected given the "attraction principle". Givón (1971:399) accounts for relativization in Swahili with three hypotheses: (i) Swahili had at an earlier stage of its syntax REL-NOM word order, that is OV; (ii) the relative pronoun arose at a time when it appeared as a verb suffix, which kept it next to the head noun; and (iii) the word order changed to NOM-REL, that is VO, while the OV relative pronoun morphology remained frozen. The OV morphology of Proto-Bantu can further be supported by an areal study.

2.3.2 Tunen and Bandem SOV: a Case of Geography

Findings in support of an SOV word order for Proto-Bantu have also been provided by Hyman who brings evidence from two Bantu languages, Tunen and Bandem - both languages are still SOV (Hyman in communication to Hawkins 1983). Tunen and Bandem are languages spoken in isolated communities of the Cameroon grasslands. This region is the core from which the Bantu-speaking people penetrated into equatorial and subequatorial Africa between southeastern Nigeria and northwestern Cameroon. Accordingly, Tunen and Bandem would have remained conservative Bantu languages maintaining earlier SOV word order patterns. The SOV characteristics of Shona, Swahili, Tunen and Bandem are representations not only of Proto-Bantu word order, evident by the relics present in these languages, but also suggest an SOV word order of other languages in the Niger-Congo phylum.

2.3.3 Statistical Data

The postverbal categories of Proto-Bantu are further supported by the findings of Hawkins and Gilligan (1988) who postulate language universals with regard to affixes. In Universal 12 (p.224) it is observed that when a language is SOV, mood affixes on V (if

any) are suffixed with greater than chance frequency. Perkens-Bybee (see Hawkins and Gilligan (1988) for sample analysis) shows 88% of SOV languages with mood affixes as suffixing, and Gilligan's sample show 93% of SOV languages with mood affixes as suffixing. In conclusion, both internal reconstruction, comparative evidence and statistical studies support the assumption that Proto-Bantu was SOV. This also supports Greenberg's universals. According to Greenberg's universals, SOV languages largely show auxiliaries following the verb with the largest number preceding the verb in SVO languages as expressed in Greenberg (1961:85):

(56) Universal 16

> *. . . In languages with dominant SOV, an inflected auxiliary always follows the main verb.*

3.0 Review of problems

As outlined in section 2.1, in Modern Shona the dominant word order is SVO; i.e., the language is totally postspecifying. In section 2.2 it was maintained that Proto-Bantu was SOV. If Proto-Bantu is reconstructed as SOV, and Modern Shona is presently SVO, some explanation must account for the transition in word order. Such a transition must have taken place at some stage in the linguistic evolution of Proto-Bantu. Relics of the SOV Proto-Bantu word order in Modern Shona are evident in preverbal pronominals and adverbs. Furthermore, the presence of both preverbal and postverbal categories in Modern Shona implies a shift in the verbal morphology. The postverbal affixal position of the causative valence does not reflect SVO morphology because verbal specifiers are expected in a preverbal position in VO languages. Given the claims made by Bybee, Comrie and Vennemann indicated above, the verbal categories in postverbal position must represent relics of an earlier SOV word order. This leads to our problem regarding Shona, which is threefold: (a) why valence appears in postverbal position, while aspect-tense are in preverbal position; (b) the serialization of [aspect-tense] and verb root which appears to violate Bybee's predictions, since aspect is further from the verb root than tense; and (c) how the SOV to SVO shift occured.

4.0 Analysis

Proto-Bantu has been reconstructed as a prespecifying (SOV) language. In such a language valence, tense and aspect would appear in postverbal position:

(57) SOV VALENCE
ASPECT
TENSE

Similarly, the historical word order for Romance, Germanic and Sudanic languages was SOVAUX:[14]

[14] Examples taken from Hock (1986).

(58) Latin
cuius pater . . . a senatu populi Romani amicus **appellatus erat**
MNV AUX
'whose father . . . had been called friend by the senate of the Roman people'

(59) Sicilian
la picilidda **vattiata è**?
MNV AUX
'has the baby girl been baptized?'

If we take Bybee's semantic hierarchy into account, we would expect the following serialization:

(60) S O V [VALENCE] [ASPECT] [TENSE]

Let us assume this as stage 1 for Proto-Bantu with each category expressed lexically. We know that lexical items, particularly auxiliaries, can be subject to morphologization over time. Auxiliaries are regularly found in postverbal position in SOV languages resulting in a suffix when the auxiliaries become morphologically bound, as in the following construction:

(61) Spanish
amar-**é**
MNV-FUT
'I shall love'

In Spanish the future (FUT) **amaré** 'I shall love' is a construction built on the infinitival main verb (MNV) **amar**, and the auxiliary **hé** 'have.' The univerbation of the two shows the auxiliary having fused with the verb in the position preceding it. Such a process is common with Romance languages and reveals the fossilized position of the auxiliaries, and is thereby, suggestive of a morphology representing an earlier word order, namely that of SOV. In the linguistic evolution of Proto-Bantu to Bantu to Shona, postverbal categories undergo a process of morphologization reducing the lexical items to affixes. This process of morphologization often involves an intermediate clitic stage. The intermediary clitic stage can be illustrated by Germanic:

(62) Runic (pre-600 A.D.)
flag da **faikinaz ist**
MNV AUX
'is menaced by evil spirits'

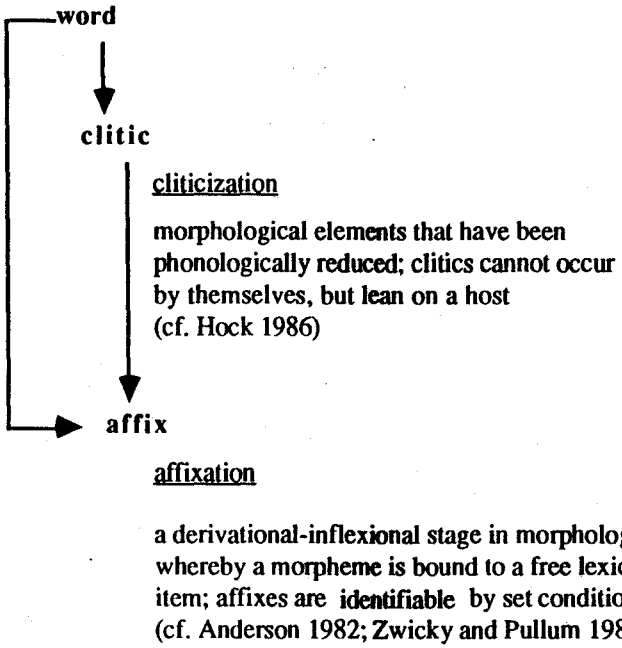
(63) Old English (post-600 A.D.)
ni s solu **sot**, ni s Akse stAin **skorin**
AUX-CLITIC MNV AUX-CLITIC MNV
'is not hit by the sun, the stone is not cut with a sharp stone'

The Runic example of pre-600 shows the auxiliary element in (62) ist as having been reduced by the post-Beowulfian period in Old English to s, as in example (63). Romance languages show a similar clitic development as illustrated by the present day French, Italian and Spanish:[15]

(64) /a/ < habet (Latin) 'has'

The Latin **habet** has been reduced to the phonemic /a/ in the Romance languages. The erosion of the auxiliary results simply in a morphological sign, the clitic. From the clitic stage the process of change can further lead to an inflexional stage of affixation. The morphologization process in which clitics and affixes develop from words can be summarized as follows:

(65) **Morphologization**



The morphologization process in (65) shows how the clitic stage is an intermediary stage between the word and affix. If morphologization occurred at the Proto-Bantu stage, we would expect only postverbal affixes:

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[15]Ibid.

(66) VERB ROOT + [VALENCE] + [ASPECT] + [TENSE][16]

Morphologization, resulting in univerbation, does then seem to answer one of our questions; namely, valence, as a postverbal affix. I assume, then, that the valence as a postverbal affix resulted from the morphologization at the earlier SOV stage of Proto-Bantu.

We are then left with the question of [aspect-tense].[17] To account for the preverbal position of [aspect-tense] in Modern Shona from the earlier postverbal position, another process requires consideration in addition to univerbation, namely that of the Principle of Clitic Placement:

(67) Principle of Clitic Placement

The preferred position for sentence clitics is position 2 of the phrase (cf. Hock 1986). (The shift that follows I refer to as AUX-Clitic Movement.)

The Principle of Clitic Placement is also supported by Wackernagel's Law: the latter maintains that historically enclitics occupied the second position of a sentence (in Collinge 1985:217-223).

The verbal categories aspect-tense underwent morphologization at the SOV stage; but rather than univerbation occurring between these two categories and the verb root to produce a postverbal affix, they fused onto each other, as commonly found in Canadian English:

(68) I'**d've** been in Zimbabwe by now
'I would have been in Zimbabwe by now'

The modal 'would' '**d** and the aspect '**ve** 'have' underwent univerbation followed by the phonological reduction and cliticization of the two auxiliaries. In Shona, the [aspect-tense] fused onto each other in their serialized position, which was followed by phonological reduction, whereby [aspect-tense] became clitics. These AUX-clitics then shifted into postsubject position as a result of the Principle of Clitic Placement, which takes us to stage 2. Since the movement to preverbal position occurred as a unit after the morphological serialization of [aspect-tense], aspect is further from the verb root than tense. Through the process of univerbation and the Principle of Clitic Placement we can answer another question; namely, the preverbal position of [aspect-tense] plus the unexpected serialization of these two categories.

Now we can consider question three: the SOV to SVO shift. Hock (1986) maintains that the change of position 2 to a verbal position is brought about by "reinterpretation":

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[16] The + indicates an affix.

[17] The - indicates cliticization, and in this case, univerbation as well.

(69) Reinterpretation

The new AUX-clitic position is then extended to include other auxiliaries, modals and any finite verb.

Once auxiliary clitics have shifted to postsubject position an eventual pattern develops: the verbal change of position 2 includes other auxiliaries, and ultimately, main finite verbs, as shown below:

(70) **Reinterpretation**

S AUX-Clitic O V-

1 2 ◄——— auxiliaries / modals / verbs [fin]
[main]

Reinterpretation thus leads to position 2 being interpreted as a verbal position. This brings us to stage 4 involving Behaghel's Law :

(71) Behaghel's Law (in Collinge 1985:241-42)

Languages are inclined towards continuous rather than discontinuous constituents.

This can be illustrated by French examples where position 2 is occupied by the auxiliary, and position 3 is occupied by the main non-finite verb which is in contrast to Old French where the main non-finite verb is in clause final position, and the auxiliary is in second position:

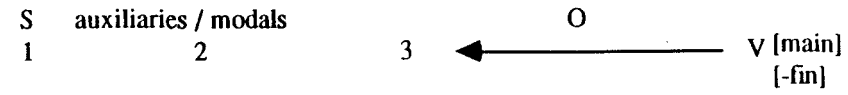
(72) Old French

vertet est de terre nee
AUX MNV
'truth is born from the earth'

(73) Modern French

la verité est née de la terre
AUX MNV

(74) **Main Verb Shift**



Behaghel's Law expresses the preference for continuous constituents. As a result, SAUXOV is possible only when the object is a pronoun. Old English testifies to the possibility of SAUXOV: in sentences where the main clause is a declarative, the finite verb is in second position but pronouns and adverbs may precede the verb, as shown by the following (in Vennemann 1974:360):

(75) Old English

se papa **hine** neht Petrus
POB

'this Pope him called Peter'

The example above shows the object pronoun **hine** immediately followed by the verb, thus permitting an SAUXOV word order. With clitics, auxiliaries and finite verbs in position 2, Behaghel's Law serves to bring the main verb into position 3. At this point it can be concluded that a total verbal shift has taken place from SOV to SVO.

Finally, once SVO word order is established, other word order patterns follow according to the Principle of Natural Serialization since a unidirectional word order is favoured. We have seen specification patterns, and evidence supporting Shona word order as having serialized as SVO. The serialization of word order begins once the verbal position is interpreted as position 2 / 3, in which specifiers follow accordingly. We can now also provide an account of the complete SOV to SVO shift, which can be explained by the following: (a) univerbation; (b) cliticization; (c) reinterpretation; (d) Behaghel's Law; and (e) the Principle of Natural Serialization.

5.0 Conclusion

Let us now return to Bybee's predictions. Bybee predicts that aspect would be found closer to the verb root than tense, and at first, the Shona data appear to be a deviation from Bybee's claims, given the position of the [aspect-tense] categories in relation to the verb root. However, such a deviation can be interpreted as the result of diachronic change, and in fact, the starting point of the analysis provides support for Bybee's position vis-à-vis verb root aspect-tense at the SOV stage. Accordingly, we can provide a coherent account of all the pertinent aspects of the development into Shona. The processes appear in the following stages: stage 1 occurring at SOV with the univerbation of [verb root+valence] and [aspect-tense]. This is also in accordance with Bybee's semantic hierarchy since it shows the closer morpho-semantic relation between the verb root and valence, but not the verb root and [aspect-tense]; stage 2 producing SOV > SAUX-

[clitic]OV as a result of the AUX-cliticization and AUX-Clitic Movement; stage 3 with the reinterpretation of the AUX-clitic position 2 as a verbal position for other auxiliaries, modals and finite verbs. Stage 3 is followed by Behaghel's Law, that is, stage 4: this stage brings the main verb[non-fin] to position 3. Finally, in stage 5, the Principle of Natural Serialization produces a complete shift in word order as shown in (76) below:

(76)

a SOV STAGE 1: UNIVERBATION — S O V[*ROOT* VALENCE] [ASPECT TENSE] (*univerbation*) (*univerbation*)

b SAUX-cliticOV
STAGE 2: AUX -CLITIC MOVEMENT — S[ASPECT-TENSE]O[V*ROOT* +VALENCE] + *AUX-clitic* <- - - - - - - - - - - - - - - - - - -*(shift)*

c

S { AUX OV
  V [+fin] O

STAGE 3: REINTERPRETATION

S { [ASPECT-TENSE] O V *ROOT* +VALENCE
  V [+fin] O

d SAUXVO
STAGE 4: BEHAGHEL'S LAW — S [ASPECT-TENSE]+[V+VALENCE] O
1 2 3

e SVO STAGE 5: PRINCIPLE OF NATURAL SERIALIZATION — *consistent postspecification*

References

Adcluhg, John Christoph. 1782. *Deutsche Sprachlehre*. Vienna: Johann Thomas Edler von Trattern.

Anderson, John M., and Charles Jones (eds.). 1974. *Historical linguistics* Amsterdam: North-Holland.

Bellusci, David Christian. 1991. *Serialization patterns in Shona verbal morphology.* Unpublished M. A. dissertation. The University of Calgary.
Brown, R. 1973. *A first language: the early stages.* Cambridge, Mass.: Harvard University Press.
Bybee, Joan. 1985. *Morphology: a study of the relation between meaning and form.* Amsterdam / Philadelphia: John Benjamins.
Collinge, N. E. 1985. *The Laws of Indo-European.* John Benjamins: Amsterdam / Philadelphia.
Comrie, Bernard. 1981. *Language universals and linguistic typology.* Chicago: University of Chicago Press.
Craig, Colette. (ed.). 1985. *Noun Classes and Categorization. Typlological Studies in Language.* Vol. 7. Amsterdam / Philadelphia: John Benjamins.
Denny, J. Peter, and Chet A. Creider. 1983. The semantics of noun class in Proto Bantu. In Craig 1983:217-39.
Fortune, George. 1987. *Elements of Shona.* Harare: Longman.
Givón, Talmy. 1971. Historical syntax and synchronic morphology: An archaeologist's field trip. *Chicago Linguistic Society* 7:394-415.
Givón, Talmy. 1975. Serial verbs and syntactic change: Niger-Congo. In Li 1975:47-112.
Greenberg, Joseph H. 1966. *Some universals of grammar with particular reference to the order of meaningful elements.* Greenberg 1966:73-113.
Greenberg, Joseph H. (ed.). 1966. *Universals of language.* Cambridge, Massachusetts: M. I. T. Press.
Hannan, M. 1984. *Shona dictionary.* Harare: College Press.
Hawkins, John A. 1983. *Word order universals.* New York: Academic Press.
Hawkins, John A., and Gary Gilligan. 1988. Prefixing and suffixing universals in relation to basic word order. *Lingua* 74:219-259.
Hock, Hans Henrich. 1986. *Principles of historical linguistics.* Berlin: Mouton
Hyman, Larry M. 1975. On the change from SOV to SVO: Evidence from Niger-Congo. Li 1975:113-162.
Lehmann, Winfred P. 1973. A structural principle of language and its implications. *Language* 49:47-66.
Li, Charles N. (ed.). 1975. *Word order and word order change.* Austin: University of Texas Press.
Lyons, John. 1977. *Semantics* . Vol. 2. Cambridge: Cambridge University Press.
McCawley, J. 1968. Lexical insertion in a transformational grammar without deep structure. *Chicago Linguistics Society* 4:71-80.
Regula, Moritz. 1966. *Historische Grammatik des Französischen* Vol. 3: *syntax.* Heidelberg: Carl Winter.
Vennemann, Theo. 1974. Topics, subjects, and word order: from SXV to SVX via TVX. In Anderson and Jones 1974:339-376.
Voretzsch, Karl, and Gerhard Rohlfs. 1966. *Einführung in das Studium der altfranzösischen Sprache.* 9th ed. [1st ed. 1901]. Tübingen: Max Niemeyer.
Zwicky, Arnold M., and Geoffrey K. Pullum. 1983. Cliticization vs. Inflection: English *N'T. Language* 59:502-513