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1.0 INTRODUCTION

The phenomenon of verb serialization, its pragmatic and semantic functions, and its implications for grammatical theory both in synchronic and diachronic study, has been receiving increasing attention in the literature over the past decade. It has been discussed extensively in relation to its occurrence in languages of Africa, particularly of the Kwa family, and has been noted in languages of Asia (e.g. Li and Thompson, 1973a,b); as well as in both Austronesian and Non-Austronesian languages of Papua New Guinea (Johnston, 1978; Bruce, 1979; Foley and Olson, 1981).

In this discussion of verb serialization in Siane, a Papuan language spoken in the area bordering the Eastern Highlands and Chimbu Provinces of Papua New Guinea,¹ I examine a number of differing uses to which Siane speakers put serial verb constructions.

1 There are approximately 27,000 speakers of Siane, which is presently classified as a Papuan language of the East Central Family of the East New Guinea Highlands Stock of the Trans-New Guinea Phylum, (Wurm, Voorhoeve and McElhanon, 1975). There are several dialects and numerous sub-dialects of Siane. Examples in this paper are from the Komongu dialect spoken in the Watabung area of the Eastern Highlands Province.

Data for this paper have been collected during extensive periods of residence, from 1960 to the present time, in Nonambalo, one of the villages of the area, under the auspices of the Summer Institute of Linguistics.

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The first function discussed is *auxiliary serialization*, in which certain verbs may be used as aspectual, deictic or valence-increasing auxiliaries with most other verbs of the language.

The second function discussed is *progressional serialization*, which involves the use of certain combinations of verbs, at least one of which must be a verb of motion, stance or contact, to indicate movement or change from one location to another, a change from one state to another, or temporal, spatial or psychological distance.

A further important function examined is *lexical serialization*, which involves serial combinations of verb stems which have a composite meaning which differs from, or goes beyond, the sum of the meanings of the individual verbs of the series.

In conclusion, it is suggested that serial verb structures in Siane are derived from coordinate structures which developed more closely bound semantic relationships and subsequently dropped the coordinating suffixation. Some synchronic contrasts between coordinated and serialized constructions in Siane are presented, and questions raised concerning the synchronic status of serial verb structures.

2.0 SERIALIZATION IN SIANE DEFINED

The term "serial verbs" has been used in somewhat differing ways by different authors, to refer to anything from a series of fully inflected, concatenated predicates, with varying language specific constraints as to the range of modal and tense/aspect agreement features and/or arguments which must be co-referential to all the verbs in series (see Stahlke, 1970), to a highly constrained and specialized set of verb stems which may co-occur with other verbs, with or without unique inflectional properties, for specific semantic and/or pragmatic purposes (see Johnston, 1978). That which all descriptions using the term seem to have in common, and which we will use as a broad definition of verb serialization for the purpose of this paper is as follows: A serial verb construction consists of two or more verbs

which occur in series with neither normal co-ordinating nor subordinating markers, which share at least some core arguments (normally subject and/or object/goal), and which in some sense function together semantically like a single predication.

In describing Siane we will use the term "serial verbs" to refer only to "stripped down" verb stems which occur in series; that is, one or more verb stems having no suffixation at all, or suffixed only with a single suffix in specialized use, which occur in series with a verb which is fully inflected in some sense. The fully inflected verb, occurring final in the series, normally carries any and all pertinent specifications for negation, tense/aspect, person/number and/or mode for the entire series, with such specifications applying to every verb in the series. The entire series functions as a unit in some semantic sense as well, the exact sense of the construction depending upon both the type of serialization and the specific verbs involved. Thus there are both syntactic and semantic motivations for considering serial verb structures as somehow functioning as a unified complex predicate of a single predication.

3.0 AUXILIARY SERIALIZATION.

3.1 USE OF A SINGLE AUXILIARY.

On the other hand, almost every verb which occurs in serial structure with other verbs in Siane may be used elsewhere, in a single-verb in its own right. Furthermore, in most if not all serial constructions, the individual semantic contributions of each verb in the series is recognizable in the overall semantic force of the construction. Thus there are both syntactic and semantic motivations for considering serial verb structures in Siane as combinations of predications, albeit highly constrained in that a) an overt NP subject may occur only once for the series, preceding the entire series, and b) there may normally be only one suffixial specification for polarity, tense/aspect, subject person/number and/or mode for the entire series, specified on the final verb of the series, with the entire series in its scope.

There are several verb stems in Siane which in their primary semantic sense may be used in a single-verb predication, but which are also often used as auxiliary verbs in serial constructions. When one of these verbs functions as an auxiliary, the primary semantic content of the construction is indicated by the unsuffixed verb stem(s) which precede the auxiliary, and the auxiliary verb stem, in addition to carrying relevant suffixation for polarity, tense/aspect, person/number subject referent and/or mode for the entire series, also contributes an aspectual, deontic or valence-increasing content to the overall semantic force of the construction. Four of these verbs are listed in (1) (a-d), together with their primary semantic meanings and their auxiliary functional meanings. In (2) (a-d), an example of each is given in a simplex sentence, illustrating its primary semantic sense. In (2) (e-i), the verb stem ^{HLH}ku 'build' is used first in a simplex sentence, and then with each of the auxiliary verbs listed in (1) in turn, illustrating the auxiliary use of each verb.

(1)	<u>verb stem</u> ²	<u>-aux</u>	<u>+aux</u>
(a)	^{HL} mino	'be, remain'	continuative
(b)	^H fulilo	'finish'	completive
(c)	^H ko	'see, perceive'	abilitative
(d)	^{HLH} koli	'hear, know, perceive'	abilitative

2 There are thirteen non-syllabic segments in Siane: b,d,f,g, k,l,m,n,p,s,t,w,y; five syllabic segments: a,e,i,o,u; and four tonal units: high (˥), low (unmarked), rising (˨˨) and falling (˨˨). H indicates high tone (underlying representation) and L low tone (underlying representation). Other abbreviations and symbols are given at the end of the paper. For a detailed account of Siane phonological and morphological rules, see James (1981).

(2) simplex sentences:

(a) Númúgú mínaiye.

H_{numuN}-ku HL_{mino-ai-e}

house-in remain-3s-ind 'He is/stayed in (the) house.'

(b) Lónowa módá³ fúlílíye.HL_{lono-wa} H_{fulilo-i-e}

work-this enough finish-3s-ind 'This work is finished'

(c) Númúné káiyē. 'He sees/saw my house!'

(d) Nōné kólaiyē. 'He hears/heard my voice.'

(e) Númúná kúwaiyē. 'He built/is building a house.'

auxiliary serialization;(f) Númúná kũ mínaiye. 'He is (still in process of)
building a house.'(g) Númúná kũ fúlílíye. 'He has finished building (the)
house.'

(h) Númúná kũ káiyē.

'He really knows how to build a
house!'

(i) Númúná kũ kólaiyē.

Note, by comparing examples (1) (c) and (d), and (2) (h) and (i), that either the verb ^Hko 'see, perceive' or the verb ^{HLH}koli 'hear, know, perceive' may be used as an auxiliary verb in serial sequence to give an abilitative sense to a construction. The two verbs, however, are by no means fully interchangeable. The verb ^Hko 'see' is used only in situations where visual perception is obviously an inherent part of the ability involved. The verb ^{HLH}koli 'hear', on the other hand, may indicate any kind of understanding, knowledge or perception,

3 The adverb ^Hmoda 'enough' is often used in Siane to give a pragmatic emphasis or indicate the speaker's personal involvement and/or active participation in the action indicated, which is at times difficult if not impossible to include in an adequate free English gloss.

whether or not aural perception is necessary to the ability being indicated. Thus ^{HLH}koli 'hear' is much more widely used as an abilitative auxiliary than is ^Hko 'see'.

There is in Siane, as well as the completive aspectual auxiliary use of the verb ^Hfulilo 'finish' in serial construction, a second order verbal suffix -t which also indicates completive or perfective aspect. The suffixed form of the verb, however, carries less pragmatic force of the completive aspect than does the verb in serial construction with ^Hfulilo 'finish'. The completive suffix may also be used on the verb ^Hfulilo 'finish' to give further emphasis to the completive aspect. Compare examples (3) (a-c)

(3) (a) Númúná kutáiyê.

^{HLH}ku-t-ai-e
build-prf-3s-ind

'He has built (the) house.'

(b) Númúná kũ fúlílíyê. *'He has finished building (the) house.'*

(c) Númúná kũ fúlílótáiyê. *'He has completely finished building (the) house.'*

A zero manifestation of the second order tense/aspect verbal suffix position ⁴ indicates an aorist, neutral or unmarked tense/aspect, having the general semantic connotation of a present or immediate past event or state which may or may not be completed at the time of speaking. Thus a Siane speaker may, by using a serial verb expression (or the completive suffix) make a continuative or completive aspect quite specific, or he may leave it somewhat ambiguous if he so chooses. Compare the examples in (3) (a-c) with those in (4) (a) and (b).

4 Other tense/aspect suffixes, such as -en 'potential/future', are not pertinent to the present discussion, as they have no auxiliary serialization counterpart.

- (4) (a) Númúná kúwaiyê.
 ^{HLH}ku-Ø-ai-e.
 build-aor-3s-ind
 '*He build/is building a house.*'
- (b) Númúná kũ mínaiye. 'He is (still in the process of)
 building a house.'

There are two verbs in Siane which function serially as productive auxiliary verbs, but which are never used in a simplex sentence. They are ^{HL}ito 'augmentative' and ^{HLH}ede 'benefactive'.⁵ Examples are given in (5) (a) and (b).

- (5) (a) Númúná kũ ítaiye. 'Wow!! Has he ever built a house!!!'
 (b) Númúná kũ qédaiyê.
 ^{HLH}g-ede-ai-e
 them-ben-3s-ind 'He built/is building a house for
 them.'

The auxiliary verb stem ^{HL}ito 'augmentative' serves a variety of pragmatic functions in Siane. For instance, example (5) (a) could be used in exclamation to refer to a house which had been built to extraordinary proportions, with astounding speed, or which was outstandingly beautiful, well built or sturdy. The use of the augmentative stem often carries with it the flavour of a point of no return, and as such the most appropriate English gloss is often the past

5 The verb 'give', (^{HLH}umu in Siane), used in many Papuan languages as a benefactive or valence-increasing verb, is rarely used in this way in Siane. Any primary semantic meaning for the benefactive stem ^{HLH}ede has been lost in present-day Siane usage; nevertheless, it acts not as a suffix but as a fully functioning auxiliary verb stem both phonologically, retaining its own tone and stress, and grammatically, taking the full set of appropriate person-number object prefixes, (n-êdé 'do for me', k-êdé 'do for you(s)', Ø-êdé 'do for him/her', l-êdé 'do for us', g-êdé 'do for you(p)/them'), as well as the full range of appropriate verbal suffixation.

participial form of the verb stem with which it is serialized, as has been used in example (5) (a). Further uses of the verb stem ^{HL}ito in auxiliary serialization will be shown in succeeding sections of the paper.

3.2 USE OF MORE THAN ONE AUXILIARY

More than one auxiliary verb may be used in series, as long as their semantic functions are compatible. If no other unsuffixed verb stem precedes the series, the first verb in the auxiliary series is taken in its primary semantic sense, and the others function as auxiliaries. Consider the examples in (6) (a-c).

(6) (a) Kōlí mīnane.

HLH_{koli} HL_{mino-an-e}
hear, know remain-2s-ind

'you understand/are listening.'
(i.e. 'You remain in a state of perception.')'

(b) Míno kólanê. *'You really know how to live!'*

(c) Míno kōlí ítane. *'Wow!! Do you ever know how to live!!'*

When more than one verb is serving in auxiliary function within the same serial construction, each succeeding auxiliary verb in some sense modifies the entire preceding construction, in a kind of right-branching immediate constituent relationship, as may be seen in examples (7) (a-d).

(7) (a) Kũ kólanê. *'You really know how to build!'*

(b) Kũ fúlíló kólanê. *'You really know how to finish building!'*

(c) Kũ kōlí fúlíláne. *'You really, completely know how to build!'*

(d) Kũ kōlí fúlíló ítane. *'Wow!! Do you ever fully understand building!!'*

3.3 REDUPLICATION IN AUXILIARY SERIALIZATION

A slightly more complex kind of auxiliary serialization involves the reduplication in some form or another of a verb stem, followed by a fully inflected or further serialized form of a verb in auxiliary serial function.

Reduplication is used by Siane speakers for a variety of purposes, the precise type of reduplication differing with the various semantic or pragmatic choices involved. For instance, stems alone may be reduplicated; inflected stems may be reduplicated; certain suffixes or suffix combinations may be reduplicated; reduplication may be full, partial, or involve some modification of the reduplicated morpheme(s), either segmental or tonal or both. It may be used to indicate, for instance, plurality or quantity in nouns, superlativity in adjectives or adverbs, repetitive, continuous or habitual action in verbs, a pragmatic peak in a narrative, the intensity of a speaker's involvement in a discussion, etc. A full discussion of the uses and kinds of reduplication in Siane is beyond the scope of this paper; at least three uses, however, involving two kinds of reduplication, are directly pertinent to an adequate discussion of verb serialization in Siane.

Habitual aspect is indicated in Siane by the full reduplication of any verb stem followed by a fully inflected or further serialized form of the verb ^H_O 'do, be', as in example 8.

- (8) ... etítí nó-no ámó nê.
 LH etí-tí H no-no H o-a-mo H ne-e
 thus-co.pf eat-redup do-3p-fg exist-ind

'....It's a (a fact) that they habitually eat like that.'

An activity carried to an extreme is indicated by the reduplication of part or all of a verb stem with some segmental modification, often the deictic anchorage a, with or without a preceding nasal, as an additional syllable preceding the reduplicated portion of the expression, followed by some form of the verb stem ^H_O 'do, be' or, to indicate an even greater degree of extremity, the verb stem ^{HL}_ito

'augmentative'. Compare examples (9) (a) and (b).

- (9) (a) ...námókafo fúko-nako ótó laugónetó....
 HL namo-kafo HL fuko-nako H o-Ø-to LH lagu-one-to
 I-erg cut-redup do-ss-co bake-1s-co
 '....I cut (it) all up and baked (it) (by burying it in the ashes)....'
- (b)gítúfú - matufu ótó ginímó lómaitó....
 g-H itufu -matufu H o-Ø-to g-LH ino-mo LHL lumu-ai-to
 them-push-redup do-ss-co them-hit-1sg descend-3s-co
 '....he kept shoving them and went on down hitting them and....'
 lúmú fóu-fóu lótí ótí
 HLH lumu H fou-fou H lo-Ø-ti H o-Ø-ti
 descend explode-redup do-ss-co.pf come-ss-co.pf
 ótí
 H o-Ø-ti
 come-ss-co.pf
 'they fell down and kept coming on and on and'
 kíyani-ání afúmá ginító
 HL kían-ni- aN-ni LH afuma g-LH ino-Ø-to
 leg-their-arm-their down-there them-hit-ss-co
fúko-nafuko ótó
 HL fuko-nafuko H o-Ø-to
 cut-redup do-ss-co
 '(the stones) down there struck their legs and arms, cutting them badly.'
fâlí-afali ító ání-kíyani lekétó
 HLH fali-afali HL ito H aN-ni- HL kían-ni LH leke-Ø-to
 scrape-redup aug.mf arm-their-leg-their break-ss-co
 'scraping them horribly and breaking their arms and legs,'
 ginító leké-make ító ótí
 g-LH ino-Ø-to LH leke-make H o-i-to H o-Ø-ti
 them-hit-ss-co break-redup do-3s-co come-ss-co.pf

ótí...
^Ho-Ø-ti
 come-ss-co.pf

'striking them and breaking them badly, and they kept coming on and on and....'

Example (9) (b) also illustrates one of the pragmatic functions of this type of reduplicated auxiliary serialization, which, along with other kinds of reduplication, is used by Siane speakers to mark a pragmatic or referential peak including salient information in narrative discourse.

An intensive or prolonged activity is indicated by the full reduplication of any verb stem followed by some form of the auxiliary verb stem ^{HL}ito 'augmentative'. Consider examples (10) (a) and (b).

(10) (a)ánídó olú-olu ító lási
^HaN-niN-lo ^{HLH}o|u-olu ^{HL}ito ^{HL}lasi
 hand-their-at hold-redup aug.mf last(P)
 yaya Ámoimú lú fíyafá...
^Lya-ya ^{HLH}Amoi-mu ^Hlu ^{HLH}fí-ai-fa
 there-redup name-ref call strike-3s-cx

'...having shaken hands with all of them, she called out for Amoi last, but....'

(b)nomílí lelema kûfú ó-o íti úti
^{LH}nomili ^Llele-ma ^{HLH}kufu ^Ho-o ^{HL}iti ^Hu-Ø-ti
 girl two-def cry do-redup aug.pf go-ss-co.pf

'...the two girls, having cried bitterly, went and,

yá mónauma yonanó kí-ki íti
^Hya ^{HL}mona-ku-ma ^{LH}yo-nano ^{HLH}ki-ki ^{HL}iti
 tree base-in-def fire-redup roast-redup aug.pf

ónaiye.

^{HL}ono-ai-e

sleep-2d-ind

'having lit a huge fire at the base of (the) tree, slept (there).'

The augmentative verb stem ^{HL}ito, when it occurs unsuffixed, follows the ablaut pattern:

back vowel → high front vowel / polyfocal subject referent which is (to a greater or lesser degree of complexity) common to a number of morpheme sets in many if not most of the languages of this family.⁶ Examples of this stem with a monofocal (first person or singular) referent may be observed in the third underlined serial pair of example (9) (b) and in example (10) (a), and with a polyfocal (neither first person nor singular) subject referent in (10) (b). This phenomenon will be discussed further in the next section of the paper.

6 Several sets of inflectional morphemes in Siane, as well as a few verb stems, make a specific distinction between referents which are either first person or singular, and those which are neither first person nor singular. The terms monofocal and polyfocal respectively were first used by Young (1964, p.47-51) to describe this phenomenon as it occurs in Bena-Bena. Strange (1973, p. 85-89) reports its occurrence in Asaro, and evidences of its occurrence are found in descriptions of Kanite (McCarthy, 1965, p. 69 fn. 6), Fore (Scott, 1978, p. 52) and Gimi (McBride, n.d., p. 40-42). Deibler (1976, p. 8-9) states the ablaut rule for Gahuku as:

/o/ → /i/ / polyfocal subject

Renck reports two similar kinds of rules for Yagarua, though more complex in their outworking (1975, p. 81,82,87), and Haiman reports a complex set of ablaut rules and their applications for Hua (1972; 1980, p. 47-68). All of the foregoing languages including Siane are members of the East-Central Family of the East New Guinea Highlands Stock (Wurm 1975, p.467-8, cf. Haiman 1980, p. xxix).

3.4 USE OF THE AUGMENTATIVE AUXILIARY VERB STEM ^{HL}ITO IN COORDINATE RELATIONSHIP WITH A FOLLOWING CLAUSE.

When two clauses occur in coordinate relationship in Siane, and the subject referent of the predicate of the second clause is different from that of the first, the verb of the first clause is inflected with the appropriate person/number subject referent suffix for that clause, followed by the coordinating suffix -ito. Subject referent suffixes are anaphoric. (Siane does not have anticipatory subject referent suffixes, whereas many other Papuan languages do; c.f. Wurm 1975).

When the subject referent of the second of two clauses in coordinate relationship is the same as that of the first, the verb stem of the first clause is normally suffixed directly (i.e., without a preceding person-number referent suffix) with the coordinating suffix -to. This suffix is one of those which undergoes ablaut, becoming -ti when suffixed to a verb in a polyfocal same subject coordinate relationship with a following clause.

The augmentative verb stem ^{HL}ito may occur in auxiliary serial construction with another verb stem, where the construction is functioning in coordinate relationship with a following clause. In such instances, if the subject referent of the following clause is different from that of the serial construction, then the verb stem ^{HL}ito is inflected in the same way that any other verb stem in coordinate different subject relationship would be inflected. That is, the appropriate person-number subject referent suffix and the coordinating suffix -ito occur, as shown in example (11).

- (11) ...faifá lagú ítaito yama adaito...
 HL ito-ai-to L ya-ma HL amo-lo-ai-to
 simply bake aug-3s-co there-def neg-do-3s-co

'...he having simply baked (it) (in the ashes) (without putting a stone in to keep it hot enough, the stupid fellow!!), it wasn't (properly) cooked, and...'

However, if the subject referent of the following clause is the same as that of the serial construction with ^{HL}ito, the verb stem ^{HL}ito is not inflected as most Siane verb stems in coordinate same subject relationship would be, but rather itself undergoes ablaut, as has already been briefly discussed. As such, the stem itself may function without a coordinating suffix as a fully inflected verb in coordinate same subject relationship with the following clause. Compare examples (12) (a) (b) with examples (10) (a) (b).

- (12) (a) ...módá áfówalo olú ító ólowê
 HLH olu-o-e
 enough tail-its-at hold aug.mf hold-ls-ind

'...having grabbed it by its tail, I got it!!'

- (b) ...málualu yáfá mélé qêdé íti
 g^{-HLH}ede
 drum-redup poles put them-ben aug.pf
 ámó yama
 H_o-a-mo L ya-ma
 come-3p-fg there-def

'...the ones who come, having (triumphantly) put the (newly made) cooking drums on carrying poles for them,...

In the examples in (10), (11) and (12), the augmentative flavour of the serial constructions with ^{HL}ito is fairly obvious. In other examples of serial constructions with ^{HL}ito in coordinate relationship with a following clause, however, the augmentative flavour is less obvious, and the main function of the auxiliary stem seems to be to clarify or underline the sequencing of the two predictions; ie, the flavour of a point of no return is more in evidence than is the flavour of augmentation or superlativity. Example (14), taken from a hunting narrative, shows the use of ^{HL}ito in this way, in a very prosaic description of a hike from one point to another as a group of teenage boys looked for animals.

(14)	..meyá	ya	ditó		ditó	yófala
			HLH,			
			idi-Ø-to			
	back.its	there	ascend-ss-co		redup	ribs.its
	afíláu		leké	ító		útó...
	^{HL} afila-ku					^H u-Ø-to
	side.near.unseen-in	break	aug.mf			go-ss-co

'...we climbed up and up the ridge (of the mountain)
and, having cut across through a side (path), nearby,
we went and...'

4.0 PROGRESSIONAL SERIALIZATION.

Certain verb combinations in Siane are used together serially to indicate movement or change from one location to another, a change from one state to another, or, more broadly, to indicate spatial, temporal or psychological distance. In such serialization, which we will refer to as progressional serialization, at least one of the verbs involved must be a verb of motion, stance or contact. The most common verbs to be found in this type of serialization in Siane are verbs of motion, such as ^Hu 'go', ^{HLH}idi 'ascend', ^{HLH}lumu 'descend'. However, contact or transfer verbs, such as ^{HLH}mele 'put', ^{HLH}olu 'hold, take, touch', ^Hfulo 'send', and at least one stance or stative verb ^{HL}mino 'remain, be', also occur with a high degree of frequency. In example (15) taken from a hunting narrative, the first double

underlined serial set illustrates two verbs of contact, in which an animal taken in hunting undergoes transfer from group possession to one small, boy, Angone, who in turn takes it elsewhere. The second set illustrates two verbs of motion, used serially to describe Angone's progress as he goes.

(15) ...Agóne	<u>olú</u>	<u>úmoqétó</u>	ólutó
		∅ ^{-HLH} umu-oge-to	HLH olu-∅-to
A.	take	him-give-lp-co	take-ss-co
	<u>afímá</u>	<u>lúmú</u>	<u>wító...</u>
LH	af-i-m-a		H u-i-to
	nearby-unseen-down-da	descend	go-3s-co

'...we handed (it) to Angone, and he took (it) and went down (the mountain) a little way, out of sight, and...'

4.1 MOVEMENT OR CHANGE FROM ONE LOCATION TO ANOTHER.

The most frequently occurring examples of progressional serialization in Siane involve two verbs used serially to indicate movement or change from one spatial location to another. Both instances of progressional serialization which were given in example (15) are of this kind, one involving the movement of the animal from the group to Angone, the other involving the movement of Angone down the mountain.

It is to be expected that a locational or directional word or phrase should quite frequently be found to occur with progressional serialization of this kind, and in fact this is true in Siane. The second of the serial verb pairs which were shown in example (15) is preceded by the directional word *afímá* 'down, nearby, out of sight'. Although in this example the directional expression precedes the serial construction, the unmarked position for a directional or locational word or phrase is between the two serial verbs. Whether preceding or occurring between the two verbs in series, the scope of the locational argument includes both verbs of the series, in some

	kípwámá	<u>fúló</u>	múlítí	<u>édaitó...</u>
HLH	kípa-wa-ma			<u>∅-HLH ede-ai-to</u>
	boy-this-def	send	middle	him-ben-3s-co

'...the old woman, having placed these girls, the two of them, one on each side (of the sleeping platform), placed this boy in the middle and...'

(c)	...mélegé	olú	mínaito	óno
			HL	
			mino-ai-to	
	dance	hold	remain-3s-co	lie.down
	áyauti		<u>mínaito...</u>	
	H		HL	
	<u>a-lyaku-ti</u>		<u>mino-ai-to</u>	
	da-there-in-from		remain-3d-co	

'...she was (still) dancing and (so) they two kept sleeping away from there, and...'

Example (18) (c) raises a slight question concerning the semantic interpretation of certain serial expressions, in which it is ambiguous as to whether a straight progressional serialization or a progressional - auxiliary serial combination is involved. Since the verb HL_{mino} 'remain, be' is both a frequently used stative verb in progressional serialization, indicating a present stative result of present or previous movement, and an auxiliary verb used to express continuative aspect in auxiliary serialization, and since auxiliaries may function in their auxiliary sense with a progressional verb, it is occasionally ambiguous, as in (18) (c), as to whether the verb HL_{mino} is being used in its primary semantic sense as a stative verb in progressional serial function, or serving in an auxiliary continuative aspectual sense. Although in most instances the wider context in which the serial expression is set resolves the ambiguity, in others, the ambiguity remains.

Before discussing the specific ambiguity in example (18) (c), it may be helpful to look at an example or two where any possible ambiguity is resolved in context. In example (19) the context makes it quite clear that old Kofi's mother and daughter were already at

(20)	...Lówadí	áiyé.	Áito	yaya
		^H o-ai-e	^H o-ai-to	
	L.	come-3s-ind	come-3s-co	there-redup
	Soima	ítúfú	fúlító	ya
	^L Soi-ma	^H fulo-i-to		Lówadí
	S.-def	push	send-3s-co	there
	áyalo	<u>mínoto...</u>		L.
	^H a- ^L ya-lo	^{HL} <u>mino-Ø-to</u>		come
	da-there-at	remain-ss-co		

'...Lowandi came. He came and she pushed Soi away and Lowandi came (and) stayed right there (by her side) and...'

In example (18) (c), however, there is nothing in either the immediate or the wider context of the story to clarify with any degree of certainty whether to interpret the expression as a progressional-auxiliary serial combination and gloss it as given in the example, or whether to interpret it as a straight progressional serial sequence, using ^{HL}mino in its primary semantic sense, and thereby gloss it as 'they two stayed away from there to sleep, and...'

We have found no example in Siane of a serial sequence in which a progressional verb and ^{HL}mino has an intervening locational or directional NP where it may be interpreted unambiguously as a progressional-auxiliary serial combination. If there is an intervening NP argument, the expression is normally interpreted as straight progressional serialization, with ^{HL}mino taken in its primary semantic sense as a stative verb, the present result of previous activity, and in most instances the context makes this interpretation doubly certain. In example (18) (c), the presence of the suffix -tí 'away from' in the locational argument, as well as the two stance or stative verbs "lie down" and "remain", increase the ambiguity of the interpretation. If the speaker had wished to make an auxiliary interpretation of the expression totally unambiguous, he could have rephrased it in some such way as áyauti útí ónó mínaito 'they two went away from there and kept sleeping and...', thus divorcing the locational expression from

(c)	...káné	mánene	ya	<u>olú</u>	kôpá
	ears-my	head-my	there	take	confused
	<u>ítágeto</u>	kámodo	ênâe,		lótó
	^{HL} ito-age-to		^H o-en-a-e		^H lo-ø-to
	aug-2s-co	you-to	come-fut-1s-ind		say-ss-co
	kólowê,		lító...		
	^{HLH} koli-o-e		^H lo-i-to		
	perceive-1s-ind		say-3s-co		

'...You've so completely taken (and) muddled my thinking, and I know I want to marry you,' she said and...'

Progressional serialization describing a change of state occurs comparatively rarely in Siane, as contrasted with that involving a change of location or that involving distance. Changes of state may also be described in nonserialized expressions, using the verb ^{LH}bulu 'change in kind', or certain verbal adjunct expressions or combinations.

4.4 TEMPORAL, SPATIAL AND/OR PSYCHOLOGICAL DISTANCE.

Serialized combinations are often used in Siane to indicate a time or space span or lapse, a desire on the part of the speaker/writer to separate himself from a given situation in a personal narrative, or that one is dealing with a considerable number or mass, in describing a given activity or state. In contrast with most serial expressions in Siane, the first verb of serialized sequences indicating temporal, spatial or psychological distance does not occur as a completely "stripped down" stem. In almost all instances of this kind of serialization, the first verb of the series is suffixed with the focal given clitic -mo.⁷

7

The focal given clitic -mo has a multitude of grammatical functions in Siane. (a) As a nominal clitic it is used by a speaker to inflect a noun phrase which denotes information assumed to be salient in the consciousness of the hearer. (b) In a somewhat related way it is used as a relativizing or nominalizing suffix

4.4.1 TIME SPANS.

Any verb stem in Siane may be suffixed with the focal given clitic *-mo* and followed by a verb of motion to indicate that that state or activity takes place over a period of time. The most common verb of motion used in this way is ^{HLH}*idi* 'ascend', but ^H*u* 'go' and ^{HLH}*umu* 'descend' have also been observed. The examples in (22) (a) and (b) illustrate several such serial expressions. Example (22) (a) is from a narrative about an old lady who called all of her relatives to her side so that she could give them her final exhortations before she died, at which time she pointed out to them that she knew the end was near, because her feet had already "died" - they could feel for themselves how cold her feet were, and so on. Example (22) (b) is from a procedural text about gardening, in which the delays between specific tasks, as well as the time taken to do them, is indicated by this type of progressional serialization. In the third underlined serial set of example (22) (b), the reduplication of the full form of the verb of motion, without phonological (tonal or segmental) sandhi to indicate compounding, indicates that that activity takes place over an extended period of time.

on verbs, replacing the modal suffix of what would otherwise be a finite verb, and as such, nominalizing the entire clause and/or sentence in which that verb occurs. (c) It is used to give additional emphasis or focus to imperatives. (d) It is an obligatory suffix on most free pronouns, thus underlining their focal purpose when they are used. (e) It is used in combination with the suffix *-ta* as an intensive pluralizer for kinship terms, thus: *kunánéfó* 'my younger sibling(s)'; *kunánéfó-mota* 'all my younger siblings'. (f) It is used in progressional serialization, as described in this paper. (For a more detailed description of some of the other uses of *-mo*, particularly (a) above, see D. James and D. Potts, 1982 ms.)

- (23) (a) ...yálo mínoti yonanó
 L ya-lo HL mino-Ø-ti LH yo-nano
 there-at stay-ss-co.pf fire(wood)-intns
 kílimó méletí...
 HLH kili-mo HLH mele-Ø-ti
 fetch-fg put-ss-co.pf
 '... (you two) stay there and get a load of firewood gathered (and) stacked up and...'

- (b) ...nákúkafo Lówadí numunau
 HL naku-ka-fo H numuN-ka-ku
 grandchild-your-kin L. house-his-in
 kílimo íténagoliye. Lámo
 k^{-HLH} ilimi-mo HL ito-en-angolo-i-e
 you-lead-fg aug-fut-intnt-3s-ind we
 numudeu kílimító
 H numuN-te-ku k^{-HLH} ilimi-Ø-to
 house-our-in you-lead-ss-co
 îdáménagolone. ... ílimó
 HLH idi^{-HL} amo-en-angolo-on-e Ø^{-HLH} ilimo-mo
 ascend-neg-fut-intnt-lp-ind her-lead-fg
 ítato...
 HL ito-a-to
 aug-3p-co

'...your grandson Lowandi has firmly planned to take you to his house. We're not going to take you and go up to our place. ...They having taken her...'

The verb ^{HL}mino is often used with the focal given clitic 'mo and one of the verbs of motion simply to indicate the passage of time. The second underlined serial pair in example (22) (b) gives one illustration of this phenomenon. Example (24) illustrates the use of the motion verb ^{HLH}lumu 'descend', which is found comparatively rarely in this kind of progressional serialization. When it is used, there is often a specific reason for it, such as the activity taking place in a spatial descent as well as over a temporal span. In this

particular example, taken from a folktale which describes a fight between a cassowary and a wafondole bird, to explain where they get their distinctive red markings, the use of ^{HLH}lumu 'descend' is more metaphorical, to describe this phenomenon continuing through many generations, much as in the English metaphorical expressions "down through the ages" or "down the corridors of time".

- (24) ...onémá ya kísí-kose lótó mínomo
 today there red-redup do-ss-co remain-fg
lómamí ya fuláná ya nê.
 HLH lumu-ai-mo⁸
 descend-3s-fg-there scar(s).its there exist

'...(to) this very day, the red (markings) that have continued on down (through their generations) are its scars.'

The occurrence of an intervening NP between two serial verbs indicating a temporal span is extremely rare in Siane. In fact, we have noted only one incidence of its occurrence, given in example (25) taken from a translation by a Siane of a description of the customs of the coastal people of Papua New Guinea. Although translated material is highly suspect as good "natural" language data, the material has been edited by other Siane speakers and read by many more, as it is available in a booklet, and not even the most critical of speakers has objected to it as being unnatural or unacceptable. I include it here partly to show the creative possibilities of the language extended to describe a new situation.

8 The use of the focal given clitic -mo with the verb of motion in this example is for relativization or nominalization of that verb: when -mo is used as a nominalizing suffix, it is preceded by a subject referent person-number suffix; when used in progressional serialization indicating distance in time or space, no subject referent suffix occurs: the subject referent is the same as that of the next following verb.

- (25) Kókónási yá ya mélegé séwénilo yati
 coconut tree(s) there year(s) seven-at there-from
mínomo mêlé síkísiti séwédí yálo wíye.
u-i-e
 remain-fg put sixty seventy there-at go-3s-ind
 'Coconut trees start bearing from the seventh year,
 and go on bearing for sixty or seventy years.'

4.4.2 SPATIAL AND/OR PSYCHOLOGICAL DISTANCE.

The contact verb ^{HLH}olu 'hold, take, touch' is used extensively as the first verb in progressional serialization to indicate control or causation on the part of the subject(s) or agent(s) in the progressive action, or that the subject(s) or agent(s) had a personal and active part in the activity being described, often involving physical contact. This use of the verb has already been seen in some of the earlier examples given in this section of the paper, such as the first serial pair in example (15), example (17) (b), and example (21) (c). Its use in some instances resembles that of "take" or "up" in some dialects of English, in which speakers say, "He took and did such and such..." or "He up and did such and such...", and could frequently be glossed in that way, with roughly the same connotations.

When a Siane speaker wishes to indicate that there is some kind of distance involved in such an expression, the verb stem ^{HLH}olu is suffixed with the focal given clitic -mo. The distance indicated thus is usually spatial, but this kind of serial structure may also be used to express psychological distance, to indicate numerical increase or decrease, the exertion of more than the normal physical effort put forth to accomplish the activity, or any combination of these. If a distal relationship other than, or in addition to, spatial distance is involved, this is made clear by the context. The following verb(s) of the serial sequence, any intervening NP (the occurrence of which is very common in this kind of progressional serialization), the wider context in which the serial sequence is set, or a combination of any two or all three, may constitute the context which clarifies the

specific distal relationship indicated by any given serial construction of this kind.

In example (26), taken from a narrative about a river flooding a village, the serial sequence is used to indicate both spatial distance and physical effort, as Kindino is described as moving his old mother, against her will, from a house that is in danger of flooding to another which is safer.

(26)	...âbusá	witó	Kídínokafo	ólutó
		HLH	HL	HLH
		wi-ø-to	Kidino-kafo	olu-ø-to
	embrace	wear-ss-co	K.-erg	hold-ss-co
	útó	<u>olúmó</u>	númúná	<u>ítaito</u>
	H	HLH		HL
	u-ø-to	<u>olu-mo</u>	máu	<u>ito-ai-to</u>
	go-ss-co	hold-fg	house	aug-3s-co
	mínaiye.		another-in	
	HL			
	mino-ai-e			
	remain-3s-ind			

'...Kindino picked her up and took her and went and, having (by dint of great effort) got her (all the way) into another house, she stayed (there).'

Example (27) is taken from a narrative in which a village court decision has been made that two contestants, who have knocked over an old lady in the course of a fight, be fined K4.00 each, which will in turn be given to the old lady. The narrator, by using the serial expression, subtly indicates not only the spatial distance involved (which was almost the minimal possible for a legitimate use of this expression) in getting the money to the place where it was handed over, but also the psychological distance he himself wishes to communicate between his compliance with the court order and the blame attached to him in the whole affair.

(27)	Námo	tú	páuni	ólutó	ówe.	ólutó
				HLH olu-Ø-to	H o-o-e	
	I	two	pounds	take-ss-co	come-ls-ind	take-ss-co
	ótó			kómití	ya	gimóitó...
	H o-Ø-to		HLH olúmó			<u>g</u> -HLH imi-oi-to
			HLH olu-mo	committee	there	them-give-ld-co
	come-ss-co		take-fg			

'I took two pounds (old currency =K4.) and came. I took it and came and we two handed it over to the committee members (handling the court case) and...'

The examples in (28) (a) - (c) are all taken from the same text, a narrative about a group of people who were trapped in a cave. In (28) (a) the reduplication of the full form of the verb ^Hno-tí 'they ate', followed by the temporal progressional serial expression with reduplication of the verb of motion, indicates the great length of time they were in the cave, their only food being their kinsmen who died of starvation, one by one. In (28) (b) which follows immediately after (28) (a) in the text, the use of olúmó as the first verb of the progressional serial set indicates the gradual decrease of their numbers over this time span, until only one was left. In (28) (c), which occurs several clauses later in the text, olúmó is again used as the first verb of a progressional serial set, this time to indicate the spatial distance involved in carrying their bones to the burial ground, as well as the great number there were, underlining the extent of the tragedy.

(28)	(a)	...nótí-noti		<u>mínomo</u>	<u>útí</u>	<u>útí</u>
		^H no-Ø-tí-noti		HL <u>mino-mo</u>	H <u>u-Ø-ti</u>	
		...eat-ss-co.pf-redup		remain-fg	go-ss-co.pf redup	
		'...they ate and ate and		time kept going on and on		

(b)	<u>olúmó</u>	lāwókolo	<u>ó</u>	<u>ítato</u>	aigá
	HLH <u>olu-mo</u>	HL lawoko-lo		HL <u>ito-a-to</u>	
	hold-fg	one-at	be	aug-3p-co	later

Similarly, the use of motion verbs to signal time spans, as discussed in section 4.4.1, is in fact a metaphorical extension of the use of such verbs. Although the specific constraint that such verbs signal time spans only when they occur in specialized serial verb sequences of a certain kind may be restricted to few languages of which Siane is one, the use of motion verbs in metaphorical extension to time sequences is common to many languages, including English, as noted by Lakoff and Johnson (1980).

The use of the verb stem ^{HLH}olu 'hold, take' in serial structure to indicate control, causation and/or personal involvement, and when suffixed with focal given clitic -mo, to indicate distance, particularly psychological and/or numerical "distance", as described in section 4.4.2., is a further example of the use of a verb, in this case a verb of contact, to communicate not its primary semantic sense of physical contact but rather a metaphorical sense of "contact" between personalities, between a person and an event, or between different points on a temporal or numerical scale. This use of the verb is particularly clear in example (28) (b) where the reference is neither to physical contact nor to any spatial area involved, but simply to a numerical decrease over a period of time.

A further illustration of the use of a progressional serial construction in metaphorical extension may be seen in example (31). In this example, taken from an expository text describing different kinds of clothing worn in Papua New Guinea, there is a metaphorical use not only of the first verb of the series but also of the directional word which occurs between the two serial verbs. The first verb of the serial construction, ^{HLH}wili 'move' is, in its primary semantic sense, used to refer to such things as the movement of water when it boils or the movement of people as they search for something. In example (31) it is used serially to indicate the length of woven aprons worn by mountain dwellers. The directional term ákauma is normally used to describe something which may barely be seen from a position a great distance above it. Its metaphorical use in example (31) creates a picture designed to emphasize, by vivid exaggeration or hyperbole, the

- (c) HLH_olu H_fulo 'surpass, overcome, go beyond'
 hold send
- (d) HL_api HLH_ilibi 'teach'
 start show

Lexical serialization in Siane is a step beyond metaphorical extension of serial structures, in that any given lexicalized serial construction is a structure which has become frozen in its metaphorical or idiomatic use and must be entered in the lexicon, whereas the semantic interpretation of metaphorical uses of progressional and/or auxiliary serial structures may almost always be accurately deduced by the context in which they occur.

Whereas auxiliary and progressional serialization are highly productive processes in Siane, lexical serialization is much less so. While only verb stems referring to commonly associated activities normally enter into lexical serialization, not all verbs which refer to commonly associated activities may be serialized. On several occasions when the author has attempted to use a serial verb construction to refer to differing kinds of closely associated activities, she has been corrected and told to use a coordinate same subject construction instead. This is in striking contrast to languages in certain areas of the Sepik, such as Alambak, where verbal, nominal, adjectival, temporal and adverbial roots may apparently enter freely into serial construction in a "complex verb stem", with the general constraint that "only commonly associated notions...can be encoded by serial constructions." (Bruce, 1979, pp. 237-8). Foley (personal communication) reports a similar phenomenon in Yimas.

Although lexical serialization itself is not a highly productive process in Siane, a few verb stems are used more productively than others, entering into lexical serial construction with different verb stems to produce widely differing semantic connotations, even though the related semantic input of the individual verb stems may be traced in each. Consider the examples in (33):

This expression is shown in example (34):

- | | | | |
|------|------------|-------------|------------|
| (34) | Oíúmó | wíyaiyê | 'It fell.' |
| | HLH olu-mo | HLH wi-ai-e | |
| | hold-fg | wear-3s-ind | |

Two other such expressions include the coordinating suffix *-to/*
-ti in obligatory same subject relationship within the lexicalized
construction. The two expressions are given in (35) (a) and (b):

- | | | | |
|----------|---|--------------|----------|
| (35) (a) | ...míno | ólutó | útó... |
| | | HLH olu-Ø-to | H u-Ø-to |
| | remain | hold-ss-co | go-ss-co |
| | '... (we) continue(d) (in that state) for a long time and...' | | |

- | | | | |
|-----|--|------------|----------|
| (b) | ...mêlé | ólutó | útó |
| | put | hold-ss-co | go-ss-co |
| | '... (we) continue(d) (in that activity) for a long time and...' | | |

Note that the two constructions in (35) (a) and (b) are very similar both in form and meaning. Their semantic connotations are reminiscent of certain progressional serial expressions relating to time spans, but whereas the progressional serial construction is productive, in that any verb stem may be suffixed with the focal given clitic *-mo* and followed by some form of a verb of motion to indicate a time span, the constructions in (35) are both lexically and to a certain extent grammatically frozen. Only the last verb of each of the two serial constructions has the freedom to be inflected for a subordinate, different subject coordinate, or sentence final relationship with the wider linguistic context in which they occur, as is the case with any serial structure in Siane. The first verb stem in each of the two constructions is obligatorily unsuffixed, and the second, obligatorily suffixed with the coordinating suffix *-to*, in every occurrence of either serial structure. The suffixation of the second verb of the series is a doubly unique phenomenon among serial constructions in Siane, in that, (a) it is the only serial structure of the language

which has a coordinating suffix internal to the construction, and (b) the coordinating suffix is not functioning as such: rather, the verb is frozen in that form. It does undergo ablaut when the construction has a polyfocal subject referent, but any other change in the form of that verb will result in a different interpretation of the expression: it will no longer function as a serial construction.

It is highly probable that most if not all verb serialization in Siane has developed from same subject referent coordinate constructions which have for one reason or another developed a more closely bound semantic relationship than is normally construed under coordination, and subsequently dropped the coordinating suffix. The fact that when children and outsiders like ourselves use serial constructions in wrong contexts, they are almost always corrected by being told to use coordinate rather than subordinate or finite verb structures is strong evidence for this. It is therefore quite possible that the constructions represented by examples (35) (a) and (b) are in a stage of transition in which a closely knit lexicalization process has fully taken place, but the corresponding loss of the coordinating suffix has not.

6.0 CONCLUSION: THEORETICAL IMPLICATIONS

At the beginning of this paper, some of the characteristics of serial verb constructions in Siane were described as providing syntactic and/or semantic motivations for considering such structures as somehow functioning as unified complex predicates of single predications, whereas other characteristics seemed to provide motivation for considering them as combinations of predications.

In looking more closely throughout the paper at the different kinds and examples of verb serialization in Siane, these characteristics have been more specifically discussed and exemplified. In particular, it has been shown that in every kind of serial construction which occurs in Siane, the entire serial set functions as a unit in some semantic sense, but at the same time, the specific semantic contribution of each verb of any given series is recognizable in the

overall semantic flavour of the construction. With only two exceptions (the benefactive auxiliary verb ^{HLH}ede and the augmentative auxiliary verb ^{HL}ito), every verb stem in the language may occur either in a single-verb predication or as the first verb in at least two kinds of serial constructions: auxiliary serialization and time span progressional serialization, and most verbs may occur in quite a variety of other serial structures as well. By metaphorical extension, even verb stems which would not normally be compatible in some types of serial structures may be used in such constructions under certain contextual circumstances.

Syntactically, the scope not only of core arguments, but also of peripheral arguments such as locational, temporal and directional expressions, is the entire series of the serialized sets of verbs with which they occur. If a speaker wishes to specify an argument for one verb in series and exclude another from that specification, he must change from a serial to a coordinate construction. This is in sharp contrast to serial patterns in languages of Africa and Asia, where serial verbs at times resemble case-marking prepositions, applying only to particular arguments of a clause, to the exclusion of others (see Pike 1967, Stahlke 1970, Lord 1973, Li and Thompson 1973, and Clark 1978, among others). The scope of modality, polarity and aspectual features is also the entire series of any serial set of verbs with which they occur, and they are specified only once for each serial set, on the final verb of the series.

A locational, directional or object/goal argument may occur between verbs in series in certain kinds of progressional serialization in Siane, but not in others, and not in auxiliary or lexical serialization. When an argument does occur between verbs, its scope is still the entire serial set with which it occurs. In the kinds of serialization in which an intervening argument is acceptable, the unmarked position for such an argument is between the two serial verbs. A left dislocated position, preceding the serial construction, is used only to give focus to that argument for some specific reason.

Although verb serialization in Siane is almost certainly derived historically from coordinate clause constructions, there are a number of contrasts between serial and coordinate structures which must be specified in any adequate synchronic account of the language. Specifically, these include:

1. Serialization implies a combinatory activity semantically. Coordination implies some distinction in the activities or states represented by the verbs involved.
2. Serialization is obligatorily same subject referent. In coordination, the switch reference system monitors same versus different subject referent.
3. Serialization obligatorily lacks both the coordinating suffix and any free form coordinator. In coordination, the coordinating suffix is obligatory, and a free form coordinator may occur in certain circumstances.
4. In serialization, the scope of negation, tense/aspect, subject referent marker and mode suffixes covers the entire series obligatorily. In coordination, only the mode suffix covers the entire series; some limitation of the scope of the negative is possible; the switch reference system monitors the scope of the subject referent suffixes; tense/aspect suffixation normally covers the entire series but aspectual serialization may be more limited in scope.
5. Only certain serialization types allow an intervening argument between verbs in series, and the scope is the entire series. In coordination, there is almost unlimited freedom in the insertion of any argument between verbs, and the scope of such arguments may be one, a few, or every clause of the coordinated series.

6. Serialization is limited in the number of possibly occurring verbs, and normally a right-branching immediate constituent analysis is possible.

Coordination allows practically unlimited numbers of verbs to occur in sequence, and the analysis is more one of chaining than of layering in most instances.

As we consider the theoretical implications of verb serialization in languages of Papua New Guinea, a number of questions arise, some of which are difficult to answer because in most languages in which verb serialization occurs, it is probably a reflection of a transition stage of the language, and not all forms or kinds of serialization in a given language are at the same stage of transition (see Pike, 1967). Some of the questions which arise have already been raised earlier in this paper, but we summarize them briefly here:

1. Is a given serial construction a single unified complex predication, or a highly constrained multi-predicate construction of some sort?
2. If a single predication, is it a compound, a special type of verb phrase, or something else?
3. If a closely-knit multi-predicate construction, is it a special type of coordination, of subordination, or something else?
4. Are all serial structures in a given language to be analyzed in the same way, or may some function as single predications and others as multi-predicate constructions?

These are language specific questions at this point in investigation. No one has as yet come close to proposing or proving any language universal generalizations about verb serialization, but the more questions that are raised, the more closely we may come to finding some of the answers, both language specifically and language universally.

In Papua New Guinea Highlands languages most closely related both linguistically and geographically to Siane, verb serialization has been variously described as compounding (Kanite, McCarthy 1965, p. 64; Yagaria, Renck 1975, p. 83), as paratactic sequences, a special type of compounding (Bena, Young 1971, p. 14), as closely or tightly knit verb phrases (Kanite, McCarthy 1965, p. 64-5; Chuave, Thurman 1975, p. 351; Gahuku, Deibler 1976, p. 35-9) and as merged clauses or sentences (Longacre, 1972). Longacre (p. 48-50) discusses four possible structural interpretations for what we are here calling serial verb constructions: (a) verb phrase (b) complex clause (c) tightly knit or 'merged' sentence, or (d) a level intermediate between clause and sentence. He rejects (a) on the grounds that there may be an independent choice of object or location in some serialized sequences in some languages. He finds (c) more acceptable than (b), in that interpretation (c) maintains the distinction of a clause as a single unit of predication and a sentence as a combination of predications, and concludes that if (c) proves adequate, (d) is then unnecessary.

Ger Reesink (personal communication) claims that serialization is one step beyond clause chaining, and lexicalization or compounding is one step beyond serialization. In other words, serialization is a transition stage between coordinated sequencing of verbs and lexicalized compounding. We have seen that in Siane, one form of serialization has moved a step in the direction of compounding, namely lexical serialization. It could be considered as grammatical compounding, although it does not follow any of the rules of phonological compounding in Siane.

One further interesting theoretical question which has been raised in the literature is the relationship of verb serialization to word order in languages in which it occurs. (See Givón, 1975; Hyman, 1975; and Lord, 1977.) It is thought that, historically, Chinese has gone from SVO serializing to SOV non-serializing, while most West African languages have gone from SOV non-serializing to SVO serializing.

Givón states that "Among all verb-serializing languages Ijo (of West Africa) stands as a lone exception . . . the combination of almost a complete SOV syntax together with an extensive pattern of verb-serialization is...possible...attested...nevertheless rare." (1975, p. 98).

While the occurrence of SOV serializing languages is rare in Africa and apparently not attested in Asia, there is a great wealth of them here in Papua New Guinea, and further in-depth investigation into some of the questions raised could make significant contributions to current linguistic theory.

Abbreviations and Symbols

aor	aorist	
aug	augmentative	
ben	benefactive	
co	coordinate	
cx	contra-expectational	
def	definitive	
emph	emphatic	
erg	ergative	
fg	focal given	
fut	future	
ind	indicative	
intns	intensifier	
intnt	intensive	
kin	kinship referent	
mf	monofocal	
neg	negative	
pf	polyfocal	
prf	perfective	
redup	reduplication	
ref	referential	
ss	same subject referent	
1	first person	ˆ high tone (surface representation)
2	second person	˘ falling tone "
3	third person	˙ rising tone "
s	singular	(low tone unmarked)
d	dual	H high tone (underlying representation)
p	plural	
∅	significant absence of overt morpheme	L low tone"
(P)	Pidgin borrowing	

BIBLIOGRAPHY

- AWOBULUYI, A. Oladele., 1973. The modifying serial construction: a critique. *Studies in African Linguistics* 4.87-111.
- BAMGBOSE, Ayo., 1973. The modifying serial construction: a reply. *Studies in African Linguistics* 4.207-217.
- BRUCE, Leslie., 1979. A grammar of Alambalak. Doctoral dissertation, Australian National University. (To appear in *Pacific Linguistics*.)
- CLARK, Marybeth., 1978. Coverbs and case in Vietnamese. *Pacific Linguistics* B-48.
- COLLINS, P., 1974. The analysis of the English "modal auxiliaries" as main verbs. *Kivung* 7.3.151-166.
- COMRIE, Bernard., 1976. *Aspect*. Cambridge: University Press.
- DEIBLER, Ellis W., 1976. *Semantic relationships of Gahuku verbs*. Norman: SIL, University of Oklahoma.
- FOLEY, William A., and Michael L. Olson., 1981. Clausehood and verb serialization. To appear in *Grammar inside and outside the clause*, ed. by J. Nichols and A. Woodbury.
- FRANKLIN, Karl J., 1971. *A grammar of Kewa, New Guinea*. *Pacific Linguistics* C-16.
- GEORGE, Isaac., 1976. Verb serialization and lexical decomposition. *Studies in African Linguistics*, Supplement 6.
- GIVÓN, Talmy., 1971. On the verbal origin of the Bantu verb suffixes. *Studies in African Linguistics* 2.145-163.
- , 1975. Serial verbs and syntactic change: Niger-Congo. In Li 1975:47-112.
- HAIMAN, John., 1972. Ablaut in the Hua verb. *Oceanic Linguistics* XI. 32-46.
- , 1976. Presuppositions in Hua. *CLS* 12.258-270.
- , 1978a. Conditionals are topics. *Language* 54.564-589.
- , 1978b. A study in polysemy. *Studies in language* 2.1.1-34.
- , 1980. *Hua: a Papuan Language of the Eastern Highlands of New Guinea*. Amsterdam: John Benjamins B.V.

- HEALEY, Phyllis., 1965. Telefol clause structure. *Pacific Linguistics* A-5:1-26.
- , 1965. Telefol verb phrases. *Pacific Linguistics* A-5:27-53.
- , 1966. Levels and chaining in Telefol sentences. *Pacific Linguistics* B-5:1-64.
- HEWER, Philip L., 1976. A lexical approach to clause series in Kasem. *Linguistics* 17:19-34.
- HYMAN, L., 1975. On the change from SOV to SVO: evidence from Niger-Congo. In Li 1975:113-48.
- JAMES, Dorothy., 1966. *A phonological cycle in Siane*. University of Illinois masters essay.
- , 1970. Embedding and coordinating transforms in Siane. *Pacific Linguistics Studies in honour of Arthur Capell*, ed. by S.A. Wurm and D.C. Laycock, *Pacific Linguistics* C-13.
- , 1981. Word tone in a Papuan language: an autosegmental solution. Unpublished manuscript.
- JOHNSTON, R. L., 1978. *Serial verbs and the expression of concepts of location and motion in Nakanai*. *Pacific Linguistics* C-61.
- LAKOFF, George, and M. JOHNSON., 1980. *Metaphors we live by*. Chicago: University Press.
- LI, Charles N. (ed.), 1975. *Word order and word order change*. Austin: Texas Press.
- , and Sandra Thompson. 1973a. Serial verb constructions in Mandarin Chinese: subordination or coordination? *CLS* 9, Parasession 96-103.
- , and ———, 1973b. Co-verbs in Mandarin Chinese: verbs or prepositions? Proceedings from the Sixth International Conference on Sino-Tibetan Language and Linguistics.
- LONGACRE, Robert E., 1970. Paragraph and sentence structure in New Guinea Highlands languages. *Kivung* 3:150-163.
- , 1972. *Hierarchy and universality of discourse constituents in New Guinea languages: discussion*. Washington: Georgetown University Press.

- _____, 1976. *An anatomy of speech notions*. Lisse: The Peter de Ridder Press.
- LORD, Carol., 1973. Serial verbs in transition. *Studies in African Linguistics* 4.269-295.
- _____, 1975. Igbo verb compounds and the lexicon. *Studies in African Linguistics*. 6.23-48.
- _____, 1977. How Igbo got from SOV serializing to SVO compounding. *Studies in African Linguistics Supplement* 7.145-156.
- LUCHT, Ramona, and Dorothy JAMES., 1962. Phonemes of Siane. *Te Reo* 5.12-16.
- McBRIDE, Sam, and Nancy. n.d. Grammar essentials for Gimi, Eastern Highlands. Unpublished manuscript.
- McCARTHY, Joy., 1965. Clause chaining in Kanite. *Anthropological Linguistics* 7.59-70.
- McELHANON, Kenneth, and C.L. VOORHOEVE., 1970. The Trans-New Guinea phylum: explorations in deep-level genetic relationships. *Pacific Linguistics* B-16.
- NOONAN, Michael and Edith BAVIN., 1981. Parataxis in Lango. *Studies in African Languages* 12.1.45-69.
- OLSON, Michael., 1978. Switch-reference in Barai. *Berkeley Linguistic Society* 4.140-156.
- _____, 1979. Barai clause junctures: towards a functional theory of inter-clausal relations. Australian National University dissertation.
- PIKE, Kenneth L., 1967. Language as wave. Georgetown University Monograph, 18th Round Table 1-14.
- _____, 1970. *Tagmemic and matrix linguistics applied to selected African languages*. Norman: SIL and University of Oklahoma.
- POTTS, Denise, and Dorothy JAMES., 1983. Split ergativity in Siane: a study in markedness. Unpublished manuscript, Summer Institute of Linguistics, Ukarumpa.
- RENCK, G., 1976. *A grammar of Yagaria*. *Pacific Linguistics* B-40.
- SCOTT, Graham., 1978. *The Fore language of Papua New Guinea*. *Pacific Linguistics* B-47.

- SCHACHTER, Paul., 1974a. A non-transformational account of serial verbs. *Studies in African Languages supplement* 5.253-270.
- _____, 1974b. Serial verbs as verbs: a reply to a reply. *Studies in African Languages supplement* 5.278-282.
- _____, 1977. Constraints on coordination. *Language* 53.1.86-102.
- STAHLKE, Herbert F.W., 1970. Serial verbs. *Studies in African Languages* 1.60-99.
- _____, 1974. Serial verbs as adverbs: a reply to Paul Schachter. *Studies in African Languages supplement* 5.271-277.
- STRANGE, David., 1973. Indicative and subjunctive in Upper Asaro. *Linguistics* 110.82-97.
- THURMAN, Robin C., 1975. Chuave medial verbs. *Anthropological Linguistics* 17.342-352.
- WILLIAMS, Edwin S., 1975. Small clauses in English. *Syntax and Semantics* 4, ed. by J. Kimball, 249-273. New York: Academic Press.
- WURM, Stephen A., Donald C. LAYCOCK, and C.L. VOORHOEVE., 1975. General Papuan characteristics. *New Guinea area languages and language study* 1, ed. by Stephen A. Wurm, *Pacific Linguistics* C-38:171-189.
- WURM, Stephen, C.L. VOORHOEVE, and Kenneth L. McELHANON., 1975. The Trans-New Guinea Phylum in general. *Pacific Linguistics* C-38:299-322.
- WURM, Stephen A., 1975. Eastern Central Trans-New Guinea phylum languages. *Pacific Linguistics* C-38:461-526.
- YOUNG, Robert A., 1964. The primary verb in Bena-Bena. *Verb studies in five New Guinea languages*. Norman: SIL.
- _____, 1971. *The verb in Bena-Bena: its form and function*. *Pacific Linguistics* B-18.