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 Chiabu Provinces of Papua New Guinea,¹ I examine a number of differing uses to which Siane speakers put serial verb constructions.

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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.

I would like to acknowledge the helpful stimulation, encouragement and suggestions of other colleagues of the Summer Institute of Linguistics during the preparation of this paper, particularly Ger Reesink and my co-worker Denise Potts, and the friendly help, care and patience of the Siane people themselves, particularly Tafiyo Kendai Kafa and Jim Tela Noimbano Lomba. All responsibility for error belongs to the author alone.
The first function discussed is auxiliary serialization, in which certain verbs may be used as aspectual, deontic 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 suffixion 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 \(^{H}\text{HL}_H\) '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.

<table>
<thead>
<tr>
<th></th>
<th>verb stem</th>
<th>-aux</th>
<th>+aux</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>(^{H}\text{HL}_H\text{mino}</td>
<td>'be, remain'</td>
<td>continuative</td>
</tr>
<tr>
<td>(b)</td>
<td>(^{H}\text{füli}</td>
<td>'finish'</td>
<td>completive</td>
</tr>
<tr>
<td>(c)</td>
<td>(^{H}\text{ko}</td>
<td>'see, perceive'</td>
<td>abilitative</td>
</tr>
<tr>
<td>(d)</td>
<td>(^{H}\text{HL}_H\text{koli}</td>
<td>'hear, know, perceive'</td>
<td>abilitative</td>
</tr>
</tbody>
</table>

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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 (\(^\uparrow\)), low (unmarked), rising (\(^\downarrow\)) and falling (\(\downarrow\)). \(^H\) 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) Nůmůgú mínaíye.
   
   H numaN-ku H mino-ai-e
   house-in remain-3s-ind 'He is/stayed in (the) house.'

(b) Lónowa móda³ fůlîfiye.
   
   H lono-wa H fulîlo-i-e
   work-this enough finish-3s-ind 'This work is finished'

(c) Nůmůné káiye. 'He sees/saw my house!'

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

(e) Nůmůná kúwaiyê. 'He built/is building a house.'

   auxiliary serialization;

(f) Nůmůná kǔ mínaíye. 'He is (still in process of) building a house.'

(g) Nůmůná kǔ fůlîfiye. 'He has finished building (the) house.'

(h) Nůmůná kǔ káiye. 'He really knows how to build a house!

(i) Nůmůná kǔ kólaiyê.
   
   Note, by comparing examples (1) (c) and (d), and (2) (h) and (i),
   that either the verb H ko 'see, perceive' or the verb H H H 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 H ko 'see' is used
only in situations where visual perception is obviously an inherent
part of the ability involved. The verb H H H koli 'hear', on the other
hand, may indicate any kind of understanding, knowledge or perception,

3 The adverb H moda 'enough' is often used in Siane to give a prag-
matic 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 \( H^H \) koli 'hear' is much more widely used as an abilitative auxiliary than is \( H^H \) ko 'see'.

There is in Siiane, as well as the completive aspectual auxiliary use of the verb \( H^H \) fulilo '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 \( H^H \) fulilo 'finish'. The completive suffix may also be used on the verb \( H^H \) fulilo 'finish' to give further emphasis to the completive aspect. Compare examples (3) (a-c)

(3) (a) Númúná kutáiyē.  
\( H^L \) ku-t-ai-e  
build-\( \text{prf-3s-ind} \)  
'He has built (the) house.'

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

(c) Númúná kũ fulilótaiyē. '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 Siiane 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).

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4 Other tense/aspect suffixes, such as -\( \text{en} \) 'potential/future', are not pertinent to the present discussion, as they have no auxiliary serialization counterpart.
(4) (a) Nûmûnâ kûwaiyê.

HLH ku-ô-ai-e.

build-aor-3s-ind

'He build/is building a house.'

(b) Nûmûnâ kû mânaîye. 'He is (still in the process of)
building a house.'

There are two verbs in Siiane which function serially as productive auxiliary verbs, but which are never used in a simplex sentence. They are HLH îto 'augmentative' and HLH ede 'benefactive'.

Examples are given in (5) (a) and (b).

(5) (a) Nûmûnâ kû îtaiye. 'Now!! Has he ever built a house!!'

(b) Nûmûnâ kû qêdaiyê.

HLH gêde-ai-e

them-ben-3s-ind 'He built/is building a house for them.'

The auxiliary verb stem HLH îto 'augmentative' serves a variety of pragmatic functions in Siiane. 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

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5 The verb 'give', (HLH îmu in Siiane), used in many Papuan languages as a benefactive or valence-increasing verb, is rarely used in this way in Siiane. Any primary semantic meaning for the benefactive stem HLH ede has been lost in present-day Siiane 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-ôdé 'do for me', k-ôdé 'do for you(s)', ô-ôdé 'do for him/her', l-ôdé 'do for us', g-ôdé '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) Kőlí mînane.

\[ \text{HL}_{koli} \quad \text{HL}_{mino-an-e} \]

\[ \text{hear, know remain-2s-ind} \]

'you understand/are listening.'

(i.e. 'You remain in a state of perception.')

(b) Mîno kôlanê. 'You really know how to live!'

(c) Mîno kôlî Ýtane. '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) Ků kôlanê. 'You really know how to build!!'

(b) Ků fûlîlô kôlanê. 'You really know how to finish building!!'

(c) Ků kôlî fûlîlåne. 'You really, completely know how to build!!'

(d) Ků kôlî fûlîlô Ýtane. '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 $^H_0$ 'do, be', as in example 8.

\[(8) \quad \text{etî-tî} \quad \text{nô-no} \quad \text{âmô} \quad \text{nê.} \]
\[\quad \text{etî-tî} \quad \text{H} \quad \text{no-no} \quad \text{H} \quad \text{o-a-mo} \quad \text{H} \quad \text{ne-e} \]
\[\text{thus-co.pf} \quad \text{eat-redup} \quad \text{do-3p-fg} \quad \text{exist-ind} \]
\[\quad '\ldots\text{It's a (a fact) that they habitually eat like that.}.'\]

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 $^H_0$ 'do, be' or, to indicate an even greater degree of extremity, the verb stem $^H_L^{H_0}$ to
'augmentative'. Compare examples (9) (a) and (b).

(9) (a) ...námókafo **fûko-nako** ótô laugónetô....

  HL
  namo-kafo  fuko-nako  h-o-ø-to  LH
  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) ....gîtûfû - matufu ótô kinímô lómaitô....

  H
  g-itufu - matufu  h-o-ø-to  g-LHino-mo  LH
  them-push-redup  do-ss-co  them-hit-fg  descend-3s-co

'....he kept shoving them and went on down hitting them and....'

  lûmû  fôu-fôu  lôtî  ótí

  HL
  lûmu  h-fou-fou  h-lo-ø-tî  h-o-ø-tî
  descend  explode-redup  do-ss-co.pf  come-ss-co.pf

  ótí

  h-o-ø-tî
  come-ss-co.pf

'they fell down and kept coming on and on and'

  kîyani-ánî  afûmá  ginítô

  HL
  kiaN-nî- aN-ni  LH
  leg-their-arm-their  down-there  them-hit-ss-co

  fûko-nafuko  ótô

  HL
  fuko-nafuko  h-o-ø-to
  cut-redup  do-ss-co

'(the stones) down there struck their legs and arms, cutting them badly.

  fàlî-afali  íto  ánî-kîyani  lekêtô

  HLH
  fall-afali  h-îto  hA-ni-HLkiaN-ni  LH
  scrape-redup  aug.mf  arm-their-leg-their  break-ss-co

'scraping them horribly and breaking their arms and legs,'

  ginítô  leké-make  íto  ótí

  g-LHino-ø-to  LH
  them-hit-ss-co  break-redup  do-3s-co  come-ss-co.pf


ótí...
Ho-ô-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) ....ànîidô olú-olu ́ito lâsì
dHa-n-ni-N-lo HLo-olu HLo-olu HLo-ilito HL lâsì
hand-their-at hold-redup aug-mf last(P)
yaya Amoîmû lû ffyaîfâ...
Ly-a-ya HL Amoi-mu Hlu HL fi-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) ....nomîli lelema kûfû bo ́o ́iti útî
LH nomîli Lôle-le-ma HLkufu Hbo-̣o Hl-iti HU-ô-tî
girl two-def cry do-redup aug.pf go-ss-co.pf

'....the two girls, having cried bitterly, went and,
yá mônauma yonanô kî-ki ́iti
Hy a HL mona-ku-ma LH yo-nano HLkî-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 \(^H_l^l\)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.

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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 Yagaria, 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 \text{HLito} \text{ 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 \text{HLito} 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 \text{HLito} 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).
...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 *i*to, the verb stem *i*to 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) ...móda ñfōwalo ọlu i*to ĝ*lowe

    enough tail-its-at hold aug.mf hold-1s-ind

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

(b) ...mālu*lu ŋfá mêlê gēdē ĺ*ti
g

    drum-redup poles put them-ben aug.pf

    ĺamo yama

    come-3p-fg there-def

    '...the ones who come, having (triumphantly) put the (newly made) cooking drums on carrying poles for them,...'
Coordination in Siane may be used to encode either simultaneous or sequential activity, the ambiguity usually being resolved either by the semantics of the verbs of the coordinated predications or by the context in which they occur. Because of the usual implication of a "point of no return" in the use of the augmentative verb stem $^\text{HL}$ito in auxiliary serial construction, the presence of that verb stem in coordinate relationship with a following clause almost invariably signals a sequential relationship between the two activities. In example (10) (a) the use of the Pidgin borrc..._ last' in the context immediately following the serial construction further clarifies the sequential relationship between the two predications. The example could also be translated '...she shook hands with all of them and, last (of all), called out for Amoi, but...', which would more accurately reflect the coordination, but would lose something of the flavour of the auxiliary verb $^\text{HL}$ito.

Similarly, example (10) (b) could be translated as '...the two girls cried bitterly and went and...', which would accurately reflect the coordination but lose the completive force of the augmentative verb. If the narrator of the story had wished to indicate that the two girls cried bitterly as they went, a full reduplication of the coordinate same subject form of the verb $^\text{H}$o 'do, be' would have had to be used, as shown in example (13) rather than the reduplication of the stem alone in serial construction with the augmentative auxiliary verb.

(13) $^\text{H}$o-Ø-ti-otï $^\text{U}$o-Ø-tï $^\text{Go}$-ss-co.pf

'$...crying bitterly, (they) went and...'
In the examples in (10), (11) and (12), the augmentative flavour of the serial constuctions with \( H_L^1 \)ito is fairly obvious. In other examples of serial constuctions with \( H_L^1 \)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 \( H_L^1 \)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 \( H_L \)idi-Ø-to

back.its there ascend-ss-co redup ribs.its

afílau leké İto \( H_L \)u-Ø-to

afila-ku \( H_L \)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 PROGRESSITIONAL 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 \( H \)u 'go', \( H_L \)idi 'ascend', \( H_L \)umu 'descend'. However, contact or transfer verbs, such as \( H_L \)mele 'put', \( H_L \)olu 'hold, take, touch', \( H \)fulo 'send', and at least one stance or stative verb \( H_L \)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) ...Agöne  olú  úmgétó  ólutó
         Ó-HLH umu-oge-to  HLH olu-Ô-to

A.  take  him-give-lp-co  take-ss-co

affmá  lûmu  wîto...
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 affmá '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
sense, in every instance we have noted in Siane. The two verbs may be comprised either of a repetition of the same verb or of two different verbs used together serially. Consider the examples in (16) (a-c), all taken from the same text, describing the trek of the first white man through a certain Siane area, in which the serial verb pairs, each separated by a locational NP, are underlined.

(16) a. ò Fòwe Lábau numugu ya  ámbi
    H-o-ai-mo
    come F. L. village-in there come-3s-fg
    ótò b. ídí námo numune Kílo ya
    H-o-0-to
come-ss-co ascend I village-my K. there
    ídaitó...
    HLH
    idí-ai-to
    ò- HLH ilimi-0-ti HLH idí-0-ti
ascend-3s-co him-lead-ss-co.pf ascend-ss-co.pf
ú Láiya numugu ya  ámbtú
    HLH
    lumu-0-ti
    go L. village-in there descend-ss-co.pf

'...he who came through the Fowe and Lambau villages, came (on) and climbed up to my village, Kilo, and..... they led him up (over the crest) and went on down through the Laiya villages, and...'

Although the unmarked position for a locational or directional word or phrase occurring with a progressional serial verb structure is between the two verbs, it is not uncommon for it to occur preceding the serial structure, as was noted in example (15). The pragmatic force of this marked position of the directional or locational word or phrase is to bring it into sharper focus. In the story from which example (15) is taken, a woman arrives on the scene immediately following Angone's departure, and asks the boys to give her some of the meat they've taken in hunting, but, even though Angone was still nearby, within shouting distance, he was out of sight, so they could quite truthfully tell her he had taken it and was gone, and she was satisfied and went on about her business. The specific directional
word used was crucial to the next set of events of the story, so it was moved into a more focal position, preceding the serial construction.

Although two verbs of motion with an intervening locational NP is one of the most commonly occurring patterns of progressional serialization in Siane, verbs of contact or transfer, of stance, or a combination of any two of the above, may be found in serial sequence with or without an intervening directional or locational NP. The examples in (17) (a-c) illustrate the use of contact and stance or stative verbs, either together or in combination with motion verbs, in serial construction with an intervening directional or locational NP. In each case, the two verbs in progressional serial sequence are underlined.

(17) (a) ...yáláfòmá ñú fóguli
     H ya-la-fo-ma
     older.brother-her-kin-def go shrub.type
     aílàumá falúkàiyè
     LH aila-ku-ma LH faluku-ai-e
     leaves-in-def hide-3s-ind

     '...her older brother went (and) hid (himself)
     (from her) among the fonguli leaves.'

(b) ...òlutó olú ɔmínàló mélogoûtò...
     HLH olu-ò-to H aìn-1a-1o HLH mele-oge-to
     take-ss-co take breast-her-at/to put-1p-co

     '...we take (the child) and put it to (its mother's)
     breast, and...'

(c) ...Fénámó õdàiyè. ðì Fénámò
     F. HLH idi-ai-e
     ascend-3s-ind ascend F.

     mìnotì kàmìma ya yokìlàwàmà
     HL mino-ò-tì ko-ai-mo-ma LH yokìla-wà-ma
     remain-ss-co pf see-3d-fg-def there smoke-this-def
     ìdàitàtì ya yòlá nè,
     HLH idi-ai-to
     ascend-3s-co there across.mid-distant.seen exist
speak block.pf there descend A. arrive-ss-co.pf
nóż eikawa fîyaiyê.
water footprint strike-3â-ind
'(the two girls) climbed up to Fenamo. What they saw while they were up at Fenamo was this smoke rising, and 'It's over there!!' they exclaimed and went down as far as Atalelo and followed the river.'

4.2 INTERACTION AND OVERLAP BETWEEN PROGRESSIONAL AND AUXILIARY SERIALIZATION.

An auxiliary verb may be used in its auxiliary function as the second verb of a progressional serial construction, so long as the first of the two verbs is a verb of motion, contact or stance. Auxiliary verb structures do not normally allow any argument between the verbs in series, but when an auxiliary combines with a motion, contact, or stance verb in progressional serial construction, any argument which may occur between two verbs in progressional series, and which is semantically compatible with the two specific verbs being used, may occur between the "progressional" verb and the "auxiliary" verb. Consider the examples in (18) (a-c).

(18) (a) ...kîfânâ - afanama mêlé yau íto...
stone-redup.def put there-in aug.mf
'...having put all the stones in there, (we)...

(b) ...wëná kilôfômâkafô nomîlîwâ lelema
woman old-def-erg girl-this two-def
fuló fîligâ-fîligâ gêdê íto
send one.side-other.side them-ben aug.mf
'...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...' 

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
Goni village, having preceded him in going there; there is no question of a continuative aspectual interpretation of the serial expression in that context, even though in other contexts ū mínaito can mean 'he/they two) kept going (there) and...'.

(19) ...ikánámákó ya Góni numuguka
    Hikana-ma-ko HnumuN-ka-ka
    opossum.type-def-only there G. village-in-place
    wé kilófó Kofí oto útó ñlafóte
    Hul-0-to
    man old K. take go.ss-co his.mother.and
    ñlúwáfóte ñ mínaito útó
    Hlminatingo
    his.daughter.and go remain-3d-co go.ss-co
    olúmó gimító...
    HLHulu-0-mo HlHumu-0-to
    hold-ss-fg them-give.ss-co

'...old Kofi took only the ikana opossum and went to Goni village and — his mother and daughter were there, having gone (previously), and — he went and took and gave it to them and...'

Similarly, in example (20), it is clear in the context that Lowandi has come and is on hand, (needing to take only a step when it is his turn to stand right by his dying grandmother's side and receive her parting admonitions), and not that he 'kept coming right to that place', which would be the semantic sense if a combined progressional-auxiliary interpretation were to be given to the expression.
...Lówadí áiye. Aito yaya
H_o-ai-e H_o-ai-to
L. come-3s-ind come-3s-co there-redup
Soima ítúfú fúníto ya Lówadí Ω
L. Soi-ma H_fulô-i-to
S.-def push send-3s-co there L. come
áyalo míno-to...
H_a-ya-lo H_L mino-Ø-to
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 H_L míno 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 H_L míno 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 H_L míno 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 -ti '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 úf òno mínaito 'they two went away from there and kept sleeping and...', thus divorcing the locational expression from
the serial expression entirely. If there is no intervening argument, the expression is normally interpreted as auxiliary serialization, unless the context implies a progressional interpretation, as was the case in the text from which example (19) was taken.

The benefactive stem $^{HLH}$ede and the augmentative stem $^{HL}$ito, on the other hand, function only in their auxiliary sense in progressional serial constructions. This is to be expected, since they function only as auxiliaries wherever they occur in Siane. The completive stem $^{H}$fullo 'finish' and the two abilitative stems $^{HL}$ko 'see, perceive' and $^{HL}$koli 'hear, know, perceive' have not been observed functioning as auxiliaries as the second verb of a progressional serial construction.

4.3 CHANGE FROM ONE STATE TO ANOTHER.

Just as locational or directional words or phrases may be used with two verbs in progressional serial sequence to clarify the direction, source or destination of movement or change from one location to another, so an adverbial, adjectival or nominal modifying word or phrase may be used between two verbs in progressional serial structure to specify a change from one state to another. Consider the examples in (21) (a-c).

(21) (a) ...ú kópá únumó nê. $^{H}$u-en-un-mo

$^{H}$go confused $^{H}$go-fut-1p-fg $^{H}$exist

'...it's (a fact) that we will go to confusion/to nought/from bad to worse.'

(b) ...onémá ámáléká lámo míno aílo Iténune...

$^{HL}$ito-en-un-e

today here we remain other $^{HL}$aug-fut-1p-ind

'...here and now, we (who say) "wow!! We'll be independent!!"'
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 \textit{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 -\textit{mo}.\footnote{The focal given clitic -\textit{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 idl 'ascend', but H u 'go' and HLH lumu '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.

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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.)
(22) (a) Ámo kíyánalekati HLH kiaN-la-lo-ka-ti HLH fúlumó
she feet/legs-her-at-place-from die-fg
ídaiyè Fúlumó ditó ya kéfó
HLH idi-ai-e HLH idi-0-to
ascend-3s-ind die-fg ascend-ss-co there little
wímó ditó i do áná
HLH wi-mo aN-la
wear-fg ascend-ss-co ...and hands/arms-her
fíligá-fíligá kéfó wímó útò...
HLH u-0-to
one.side-other.side little wear-fg go-ss-co...

'She (started) dying from her feet. Her dying continued on little (by little) (through her body)...and it gradually went on (into) her upper extremities and...'

(b) Etíkó etíkó êmó ditó ya
LH eti-ko H o-mo
thus-only redup die-fg ascend-ss-co there
mínone. Mínomo ídogétó ya...
HL mino-on-e HLH idi-oge-to
remain-lp-ind remain-fg ascend-lp-co there
kífímó ditó ditó...
HLH kifi-mo
plant-fg ascend-ss-co redup...

'We stay there continuing to do just like that. We continue on and on and...we keep on planting and planting and...'

Occasionally, a verb stem suffixed with -mo is followed by a contact or transfer verb, or the auxiliary verb HLH ito. This is almost always an indication that not only a time span but some degree of spatial distance is also involved, as shown in the examples in (23) (a) and (b).
...yálo mínoti yonánó
Lyálo ḿino-Ø-tì LHyo-nano
there-at stay-ss-co.pf fire(wood)-intns
kílimó méletí...
HLHkíli-mo HLHmele-Ø-tì
fetch-fg put-ss-co.pf

'... (you two) stay there and get a load of firewood
gathered (and) stacked up and...'

(b) ...nákúkafo Lówadi numunau
HLnaku-ka-fo HnumuN-ka-ku
grandchild-your-kin L. house-his-in
kílimo íténagoliye. Lámo
k-HLHili-mi-mo HLito-en-agolo-i-e
you-lead-fg aug-fut-intnt-3s-ind we
numudeu kílimító
HnumuN-te-ku k-HLHili-mi-Ø-to
house-our-in you-lead-ss-co
̣dáménagolone. ...ílimó
HLHidi-HLamo-en-agolo-on-e HLHili-mo-mo
ascend-neg-fut-intnt-lp-ind her-lead-fg
ítato...
HLito-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 HLmino 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
lómmamí ya fuláná ya nè.

HLH lumu-ai-mo 8
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.

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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 presessional 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 mēlē sīkisiti séwédí yálo wíye. 
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 ōlu '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 ōlu 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) ...ábusá witó Kídínokafo ólutó
HLH wi-ô-to HL Kidino-kafo HLH olu-ô-to

embrace wear-ss-co K.-erg hold-ss-co

útó olúmọ númūná máu ílaito
Hu-ô-to HL olu-mọ H ma-ku HL íto-ai-to

go-ss-co hold-fg house another-in aug-3s-co

mínaiye.
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-ʊ-to H o-o-e
I two pounds take-ss-co come-1s-ind take-ss-co
ótó olúmọ kómití ya gímótó... HLH olu-mo -HLH imi-o-i-to
come-ss-co take-fg committee there them-give-ld-co

'I took two pounds (old currency =£4.) 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 Ḥ no-ʊ-ti '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 olú-mọ 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, olú-mọ 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-notí mínomo ùtí ùtí
H no-ʊ-ti-noti HL mínomo Ḥ y-ʊ-ti
...eat-ss-co.pf-redup remain-fg go-ss-co.pf redup
'...they ate and ate and time kept going on and on

(b) olúmọ lówókolo ò ìtató aigá
HLH olu-mo HL lawoko-lo HL ito-a-to
hold-fg one-at be aug-3p-co later
fólayê.

HLH_fulu-ai-e
die-3s-ind

until, finally, at there being only one of them left, later he (too) died.'

(c) ...aumânínámáko
LH_auma-ni-na-ma-ko

...bone(s) -their-emph-def-only
HLH_olu-ô-ti

hold-ss-co.pf

ólútí
HLH_olu-mo

mêlé gêdamó
HLH_ede-a-mo

descend-ss-co.pf hold-fg put them-ben-3p-fg

nê.
H_ne-e

exist-ind

'...it's (a fact) that they took just their bones and went down and took (them all to the burial ground) and buried them.'

One other illustration of this kind of progressional serialization may be seen in the final two words of example (19), in which the distance travelled by old Kofi, the physical effort involved in an older man's going that far to take the animal to his mother and daughter, and the psychological incredibility experienced by the narrator of the story, a younger man who wasn't about to share his part of the meat with his female relatives, let alone travel any distance to do so, may all be inferred from the suffixation of -mo to HLH_olu in the serial expression olú-mó g-imí-tó 'he took (it) (and) gave (it) to them and...'.

4.5 METAPHORICAL EXTENSION IN PROGRESSIONAL SERIALIZATION.

Occasionally, verbs which are not normally considered motion, contact or stance verbs are used serially with an auxiliary or pro-verb, with an intervening locational NP, as a metaphorical extension of progressional verb serialization. For instance, the verb Hko 'see,
'perceive' is sometimes used in this way, much as in English one might say "She cast a look in his direction". Consider example (29):

(29) Kitō kō afímáu ìtai̊ma...
HLHki-Ô-to LHaf-i-m-a-ku HLito-ai-ma
roast-ss-co see near-visible-down-da-in aug-3s-def

'He roasted (it) and (as he) looked down nearby (there) what he saw was…'

The serial construction in (29) is a rare example of a non-progression[1]al verb used alone preceding an intervening NP in progression-serial structure. More often, it is serialized with the transfer verb ꠿fulo 'send', as in examples (30) (a) and (b).

(30) (a) ...kō fülô òfúguka aufá
HLofuN-ku-ka LHaf-u-Ô-a
see send bedroom-in-place near-unseen-up-da
ìtai̊ma...
HLito-ai-ma
aug-3s-def

'…(as he) looked up into the sleeping platform, what he saw was…'

(b) ...lů fĩ fülô yálêkâ wákâ ìtî...
call strike send up down do-redup aug.pf

'…they called up and down (the valley), shouting:…'

Other ways in which progression serialization is used metaphorically are those in which something which does not actually involve spatial motion or distance is referred to as though it did. Some instances of this kind of metaphorical extension in the use of progression-serial structure have already been discussed. For instance, the examples given in section 4.3 illustrating the use of progression serialization to indicate a change from one state to another could be thought of as metaphorical extensions in the use of the verbs ꠿u 'go' in example (21) (a) HLH olu 'take, hold' in (21) (c) and perhaps, to a lesser extent, the verb ꠿lúminó 'remain, be' in (21) (b) in progression serialization.
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 *'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, *'willi '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
length of the net aprons.

(31) ...mónabí nófukáfó olú fe lámó ya
HLH
nofu-kafo Hlo-a-mo
apron(s) string-erg hold straight do-3p-fg there

wílí ákauma ítae.
HL aka-u-m-a HL ito-a-e
move far-seen-down-da aug-3p-ind

'...the aprons that they make with string -- wow!! they
weave them so-o-o-o long!!!'

Although progressional serialization is used in various differing
metaphorical senses in Siane, by far the most frequently occurring
kind of progressional serialization is the straightforward non-meta-
aphorical indication of movement or change from one spatial location
to another. Of the metaphorical uses, the only two kinds which occur
with any degree of frequency are those involving time spans and those
involving the use of HLH olú 'hold, take' to indicate control, causation
and/or personal involvement on the part of the subject/agent. Others
are comparatively rare.

5.0 LEXICAL SERIALIZATION.

Lexical serialization in Siane involves idiosyncratic serial verb
combinations in which the composite meaning of the serialized structure
is different from, or goes beyond, the sum of the semantic contri-
butions of the individual verbs which comprise the series. A few such
combinations are listed in (32):

(32) (a) HLH ku HL ono
build sleep
'prepare dwelling place
(nest, home, village)'

(b) HL moni HLH willí
travel move
'search for'
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 Alamblak, 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):
(33) (a) \( H^LH_{mele} : 1. \ H^LH_{mele} \ H^LH_{ede} \ 'bury' \)
   \( put \hspace{1cm} ben \)
   \( 2. \ L^H_{mofu} \ H^LH_{mele} \ 'marry' \)
   \( cover \hspace{1cm} put \)
   \( 3. \ H^L \ H^LH_{mele} \ H^LH_{ede} \ 'actions toward' \)
   \( do \hspace{1cm} put \hspace{1cm} ben \)
   \( 4. \ H^L_{lo} \ H^LH_{mele} \ 'command, make a law' \)
   \( speak \hspace{1cm} put \)
(b) \( H^L_{lo} \)
   \( 1. \ H^L_{lo} \ fuko \ 'forbid, taboo' \)
   \( speak \hspace{1cm} cut \)
   \( 2. \ H^L_{lo} \ H^LH_{umu} \ 'tell, talk to' \)
   \( speak \hspace{1cm} give \)
   \( 3. \ H^L_{lo} \ H^LH_{mele} \ 'command, make a law' \)
   \( speak \hspace{1cm} put \)
(c) \( H^L_{ko} \)
   \( 1. \ H^L_{ko} \ H^L_{ito} \ 'leave alone' \)
   \( - \hspace{1cm} see \hspace{1cm} aug \)
   \( 2. \ H^L_{ko} \ H^L_{mino} \ 'wait' \)
   \( see \hspace{1cm} remain \)

It may be seen from some of the examples shown in (33) that certain verb combinations in lexical serialization could give rise to ambiguity in interpretation. For instance, either of the lexicalized examples with \( H^L_{ko} \ 'see' \), or the first example with \( H^LH_{mele} \ 'put' \), should in certain contexts be interpreted as auxiliary serial constructions, with the first verb of the serial sequence taken in its primary semantic sense and the second in an auxiliary sense rather than the composite semantic connotations of the lexicalized serial construction. In almost all cases, the wider context in which the serial construction is set would resolve any ambiguities in interpretation.

A few verbal constructions have become frozen in a lexical serialized form which involves more than the concatenation of simple verb stems. One such expression is in fact a lexicalized or idiomatic use of a progressional serial construction expressing spatial distance.
This expression is shown in example (34):

(34) Olu:mọ
    HLH
hold-fg
wiyaiyẹ
    HLH
'it fell.'
wi-ai-e
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) ...mi:no
    HLH
remainder
    olo:ọ-to
hold-ss-co
'...(we) continue(d) (in that state) for a long
time and...'

(b) ...mèlé
    HLH
put
    olo:ọ-to
hold-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 con-
struction 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 con-
structions 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 con-
structions 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 pos-
sible 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 co-
ordinating 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 predi-
cations, whereas other characteristics seemed to provide motivation
for considering them as combinations of predicators.

In looking more closely throughout the paper at the different
kinds and examples of verb serialization in Siane, these character-
istics 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 con-
tribution 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 \( \text{H}_L \text{H}_L \text{H}_L \) and the augmentative auxiliary verb \( \text{H}_L \text{H}_L \text{t}_o \)), 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 progres-
sional 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 high tone (surface representation)
  2 second person falling tone "
  3 third person rising tone "
  s singular (low tone unmarked)
  d dual high tone (underlying representation)
  p plural
  Ø significant absence of L low tone"
  overt morpheme
  (P) Pidgin borrowing
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