SEQUENCES OF VERBS IN MAYBRAT[1]

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Maybrat is spoken by approximately 22,000 speakers in the central Bird's Head area of Irian Jaya, Indonesia. Data for this contribution were collected in Ayawasi, central Bird's Head, over a period of two years. Like many Papuan languages, Maybrat makes extensive use of juxtaposition of verbs. In recent literature criteria to distinguish between serial verb constructions and clause-chaining constructions have been discussed extensively. In this article, an attempt is made to find if such a distinction is warranted for Maybrat. Constructions involving juxtaposed verbs are compared from four points of view namely semantic, intonational, morphological and syntactic. The latter involves negation, where the relevant criterion is the scope of the negator; relativisation; and insertion of an overt coordinator. Apart from a few exceptions, it will appear that there are no clear arguments to distinguish between two types of construction.

1 Introduction

The question of verb serialization as opposed to clause chaining has been a topic of considerable debate in recent years. In Maybrat[2], a Papuan language of Bird's Head, Irian Jaya, Indonesia, sequences of juxtaposed verbs are common. A description of these sequences should bear out whether they are serial verb constructions or clause-chaining constructions. In serial verb constructions, one single clause contains more than one verb. Some formal criteria for serial verb constructions are as follows:

(1)a. There cannot be any overt conjunctions between the verbs (Zwicky 1990:4; Foley and Olson 1985:18; Sebba 1987:39);
   b. All the verbs have the same aspect, tense and mood (Zwicky 1990:4; Foley and Olson 1985:28; Sebba 1987:39);
   c. There must be no ascertainable clause boundary between the two verbs (Sebba 1987:39);
   d. The serial verbs refer to one single event (Comrie 1995:26);
   e. They have only one overtly expressed (syntactic) subject (Sebba 1987:86);
   f. Verbs in a serial verb construction must also be able to occur as single predicates.

Some characteristics of clauses are given below:

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[2] Maybrat has been classified as belonging to the West Bird's Head Stock of the West Papuan Phylum (Voorhoeve 1984:82). Maybrat is spoken by approximately 22,000 speakers in the central Bird's Head area (Brown 1991:1). Data for this contribution were collected in the village of Ayawasi, central Bird's Head, over a period of twenty-one months, from September 1993 - January 1995, and from October 1995 - January 1996.

(2)a. A clause is a unit which is dominated by a single intonation contour (Givón 1985:235);

 b. Clauses are the surface structure units which correspond most closely to individual predications (Longacre 1985:235).

Although (2b) remains difficult because it is a potentially circular definition (Givón 1991:140), it will nevertheless be used alongside (2a). (2b) will only be referred to when both on syntactic and semantic grounds there is reason to assume that an individual predication is being dealt with.

 Given the criteria in (1), the following example from Yimas, a language of the Sepik basin in Papua New Guinea, is a serial verb construction:

(3)   *na-bu-wul-cay-pra-kiak*
       3S.O-3P.S-afraid-try-come-remote.past
       'They tried to make him afraid as he came.' (Foley and Olson 1985:23)

There are no overt conjunctions between the verbs ((1a)), which all the verbs have the same mood, evidential status, aspect and tense ((1b)). In fact, this multiple predicate construction is made up of one word corresponding to one clause ((1c)) (Foley and Olson 1985:23). Conversely, the verbs in the English sentence in (4) are not serial because there is an overt coordinator between the two verbs, thus violating criterion (1a). The sentence can be said to consist of two clauses because there are two syntactically and semantically distinct predications ((2b)):

(4)   He eats and drinks.

The Maybrat sentence (5) has two intonation contours, indicating two individual predications, so that it qualifies as a multi-clausal sentence according to both criteria in (2).

(5)   *y-ehoh   y-apo*
       3M-hit   3M-eat.meat
       'He hits and eats it.'

 Although the criteria in (1) and (2) seem rather straightforward to begin with, the following sentence from Maybrat poses a problem:

(6)   *y-ros   y-o   pam*
       3M-get.up   3M-fetch   axe
       'He gets up and fetches an axe.'

Sentence (6) is often translated by informants as *dia ambil kapak* 'he fetches an axe'. There is no overt conjunction between the two verbs (1a); given the second reading it seems as though the verbs refer to one single event (1d); and all the verbs have the same mood, aspect and tense (1b). On the other hand, on first inspection it is not clear if there is an ascertainable clause boundary between them ((1c)) since (6) is not always dominated by a single intonation contour (2a). Secondly, one could consider (6) in violation with (1e) in that both verbs are explicitly marked with a subject prefix, albeit with the same

referent. In other words, an analysis of (6) is not straightforward, because it is in agreement with some criteria in (1) and (2) while violating others.

Although Maybrat has very little morphology upon which to base grammatical distinctions, this is no reason to assume that a distinction between serializing constructions and chains of single verb clauses is unwarranted. This lack of morphology is also common in creole languages and Chinese (Sebba 1987:3). Despite this difficulty, it turns out that in these languages syntactic criteria can be used to find grammatical distinctions between serializing constructions on the one hand and clause chaining ones on the other.

There are a number of verb sequences in Maybrat which resemble serial verb constructions as they are claimed in other languages. These need further investigation. As in many serializing languages (Foley and Olson 1985:41), verbs like *-amo* 'go' and *-ama* 'come' are commonly found in sequence with other verbs. Additional verbs that are likely to be found in serialized constructions are 'postural' verbs (Foley and Olson 1985:42), such as *-hu* 'stay' and *-ros* 'get up'. These four verbs are frequently found in constructions followed by another verb.

Another property of serializing languages is that serial verb constructions are used to increase the valency of a construction (Zwicky 1990:3; Foley and Olson 1985:48; Sebba 1987:216) so that through the addition of a verb an extra argument is added. In resulting constructions it is often the case that the object of the first verb is the subject of the second verb (Sebba 1987:212). Also, individual verbs for semantic functions such as 'instrumental' are common in serializing languages (Sebba 1987:12). In Maybrat, both valency-increasing constructions and verbs expressing an 'instrumental' are found.

A final category that is often encountered in serializing languages consists of expressions such as 'X hits Y dies' for 'X kills Y'. They are referred to as 'lexical idioms' (Sebba 1987:197). The equivalent of the expression 'X hits Y dies' is found in Maybrat too.

Thus, typologically speaking, the Maybrat data hint at the presence of serial verb constructions. But what really makes a construction 'serial'? Zwicky (1990:2) states that the term 'serial' tends to be used to refer to juxtaposed verbs in general, without stating explicitly the relationship between these verbs. Following the criteria given in (1b) - (1e) above, serial verb constructions will be those where the verbs are in a subordinating relationship: one verb is the head of the construction, and the rest are complements (Zwicky 1990:3). The head may have properties, such as subject-prefixes, that the dependents do not have (eg. (3)). Sentence (5) is an example where the verbs are in a coordinating relationship: there is more than one head and each head is of the same syntactic category and rank (Zwicky 1990:4). As such, in the present paper, the term 'serial' will be used to refer to subordinating constructions, as opposed to coordinating, or clause-chaining, constructions.

In this paper I propose to subject the data to closer scrutiny to see whether there are formal reasons to differentiate between subordinating constructions on the one hand and coordinating constructions on the other. If not, then such a claim would, despite the suggestive nature of the data on first inspection, not be tenable.

The remainder of this paper consists of the following sections: In Section 1 I will give examples of the constructions that seem most likely candidates for subordinating constructions in Maybrat. These are firstly, sequences involving the verbs *-amo* 'go', *-ama* 'come', *-ros* 'get up' and *-hu* 'stay' (Section 1.1), secondly, valency-increasing constructions (Section 1.2) and thirdly, the expression 'X hits Y dies' (Section 1.3). Subsequently, in Section 2, I will give examples of sentences that unequivocally represent

coordinating constructions, as in (5) above. In Section 3, I will return to the examples in Section 1 and I will test these to find if they differ structurally from coordinating constructions. The evidence for this will be semantic (Section 3.1), phonological, (Section 3.2), morphological (Section 3.3) and syntactic (Section 3.4).

All examples in Section 1 have been taken from transcribed narratives and spontaneous speech.

Because research into the Maybrat language was still being carried out at the time of writing this paper, the results presented here are of a tentative nature.

2.1 Evidence suggestive of serial verb constructions

2.1.1 Constructions with verbs of movement and stative verbs

(7)a. *-amo*   *m-amo*[3] *m-ate*   *aya*
            3U-go   3U-bathe   water
            'She is going to bathe.'

   b. *-ama*   *Mafif*   *y-ama*   *y-o*   *pam*
            Mafif   3M-come   3M-fetch   axe
            'Mafif comes to fetch an axe.'

   c. *-ros*   *y-ros*   *y-o*   *tfo*
            3M-get.up   3M-fetch   bush.knife
            'He fetches a bush-knife.'

   d. *-hu*   *m-atia*[4]   *y-hu*   *ste*
            3U-father   3M-stay ϕ-wait[5]
            'Her father waits (is waiting).'

The translations of the sentences in (7) suggest that the motion/position verbs might be used as markers of aspect. When translating combinations like these with informants, these four verbs are often not explicitly translated. This suggests that in constructions like these the second verb is a kind of 'head' and the first one an auxiliary marker. As such, *-amo* could mark intentional aspect; *-ama* venitive aspect, *-ros* inceptive aspect and *-hu*

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[3] The prefix *m-*, the unmarked third person pronominal prefix, can refer to either third person singular feminine or third person plural. Where both are possible, the third person singular feminine will be taken as default. Likewise, the second person pronominal prefix *n-* is used for both the singular and the plural. It will be translated as singular in the present paper.

[4] In Maybrat, nouns are classified into two classes. The first class consists of all inalienably possessed nouns, namely body-parts and kinship terms. Morphologically the behaviour of these nouns is similar to that of verbs: they receive a subject prefix that is coreferential with their possessor, and they are subject to the same phonotactic constraints. To the second class belong all other nouns. They are not inflected.

[5] Verbs with vowel-initial stems and verbs with a monosyllabic stem consisting of either a light vowel or a diphthong receive an obligatory subject prefix. Verb-stems that begin with a CC sequence, that contain a long vowel, or that are polysyllabic do not receive this prefix. Thus, the verbs *kro* 'follow', *frok* 'arrive', *ste* 'wait', *tiim* 'send' and *tutu* 'chase' lack an overt subject prefix because of phonotactic reasons, not because of syntactic function or position.

continuous aspect. If they are aspectual verbs, then they have to be analysed as modifiers of the 'head' which, in (7) is the second verb. For instance, in (7c) *y-o* 'he fetches' would be the main verb, and *y-ros* 'he gets up' would mark that the action is beginning to take place.

The verbs 'come' and 'go' are also found in constructions where they follow instead of precede another verb:

(8)a. *t-aru   awiah   m-ama*
    1S-pull taro   3U-come
    'I pull the taro towards me.'

  b. *aya   m-o   ara   m-amo*
    water 3U-fetch   wood   3U-go
    'The water takes the wood away.'

  c. *t-ai   bola   m-ama*
    1S-hit   ball   3U-come
    'I throw the ball towards (addressee).'

Here, the subjects of *-amo* and *-ama* are coreferential with the objects of the preceding verbs. The motion verbs indicate the direction of the object as a consequence of the first action. Constructions like these are attested in many serializing languages (Foley and Olson 1985:48; Sebba 1987:212), and can be serial verb constructions, even though (1e) is violated by the presence of subject prefixes on both verbs.

2.1.2 Valency-increasing constructions

There are several verbs which increase the number of arguments that an expression can accommodate. In the first place, the verb 'take' is often used in serial constructions to add an instrumental argument (Foley and Olson 1985:53). In Maybrat, constructions with *-o* 'take' to add an argument are common (see (9a)). Expression of instrumental is with the verb *-kah* 'with', as in (9b).

(9)a. *y-o   pam   y-fat   ara*
    3M-fetch   axe   3M-fell tree
    'He takes the axe and fells the tree.'

  b. *y-fat   ara   m-kah   pam*
    3M-fell tree   3U-with   axe
    'He fells the tree with an axe.'

Secondly, in some serializing languages ditransitive verbs like 'give', 'send', 'lend' and 'bring' require a serial construction with 'take' (Foley and Olson 1985:54). This process also occurs in Maybrat, where verbs taking more than two arguments are not found, as is borne out by the unacceptibility of (10b):

(10)a. *n-o tapak n-e tuo*
2-fetch tobacco 2-give 1S
'You fetch tobacco and give it to me.'

b. **n-e tuo tapak*
2-give 1S tobacco

(11) *tiim aam m-kah Petrus*
ϕ-send letter 3U-with Petrus
'She sends a letter to Petrus.'

Whereas *-kah* in (9b) marks the instrument, it also markes the recipient, as an extra argument in (11).

2.1.3 The expression 'X hits Y dies'

Description of killing in terms of two verbs, as in (12), is common in serializing languages (Sebba 1987:212). In spite of the fact that the subjects are not coreferential, thus violating (1e), (12) will be considered in the analysis, following Sebba (1987).

(12) *y-ehoh fane m-hai*
3U-hit pig 3U-dead
'He hits the pig and it dies.'

The expression above is also frequently translated as 'he kills the pig'. Although the translation suggests that the action described is a single one, this must nevertheless be demonstrated. Sebba refers to constructions of this type as 'lexical expanders' (Sebba 1987:217).

3 Evidence for clauses in Maybrat

In the present section I will give sequences of single-verb clauses in Maybrat. The definitions of a clause given in (2) above will be used as a yardstick.

    In Maybrat, it is often the case that single verb clauses follow one another in a single sentence, for example (5) above.

(13)a. *n-atim t-rof*
2-lead 1S-follow
'You lead, I follow.'

b. *y-hah ftah eyok*
3M-crack ϕ-break two
'He cracks and it breaks in two.'

(14)a. *ait   y-fat   aof   m-tie   m-ai   tapam*
       3SM   3M-fell sagotree   3U-break   3U-hit   ground
       'He fells the sagotree and it breaks and hits the ground.

    b. *y-fat   aof   m-ai   tapam*
       3M-fell sagotree   3U-hit   ground
       He fells the sagotree and it hits the ground.'

In (13) and (14) each individual clause expresses an action. As such, they comply with Longacre's criterion that clauses correspond most closely to individual predications (viz. 2b). The sequences of clauses simply enumerate a series of events, without there being a syntactic relationship of dependence, such as subordination, complementation or adjunction between the clauses. As such, one of the verbs can be taken out without affecting the syntactic structure of the sentence. Only the meaning of the sentence changes, cf (14a) and (14b).

4 Testing the constituency of the putative serial verb constructions

In the present section the sentences given in Section 1 as possible examples of serial verb constructions are examined in detail. They will be examined from four points of view, namely semantic, phonological, morphological and syntactic. In judging the grammaticality of the sentences, both syntactic and pragmatic factors will be taken into account.

4.1 Semantics

According to criterion (1d) serial verbs must refer to one single event. Consider the following sentences in Maybrat ((15d) is repeated from (7c)):

(15)a. *y-o   tfo*
       3M-fetch   bush.knife
       'He fetches a bush-knife.'

    b. *y-amo y-o   tfo*
       3M-go 3M-fetch   bush.knife
       'He goes and fetches a bush-knife.'

    c. *y-ama   y-o   tfo*
       3M-come   3M-fetch   bush.knife
       'He comes and fetches a bush-knife.'

    d. *y-ros   y-o   tfo*
       3M-get.up 3M-fetch   bush.knife
       'He gets up and fetches a bush-knife.'

(16)a. n-amo   pastoran,   t-hu   ste   nuo
2-go   parish.house   1S-stay   wait   you
'You go to the parish-house, I stay and wait for you.'

b. n-amo   pastoran,   tuo ste   nuo
2-go   parish-house   1S wait   2S
'You go to the parish-house, I wait for you.'

The examples in (15) have all been translated uniformly into Indonesian as *dia ambil parang* 'ne fetches a knife' by informants. However, it is understood that in (15b) and (15c) a man actually moves and fetches the knife. As such, it is clear that the verbs *-amo* 'go' and *-ama* 'come' refer to separate actions. Likewise, in (15d), the verb *-ros* actually refers to the man getting up, after which he fetches his bush-knife. The verb *-hu* in (16a) implies that the speaker will stay where he is, and wait for the hearer to return from the parish-house. In (16b) no such implication is present: the speaker will just wait.

In the case of *-amo*, *-ama*, and *-ros*, a physical movement in addition to the action specified by the second verb is implied. Thus, with the exception of (15a), all the sentences in (15) refer to multiple events. As such, these constructions fail criterion (1d) for serial verbs, which stipulates that they must refer to a single event.

From the translations in (15) it appears that the 'suspect' verbs are not aspectual verbs, as was suggested above. There is another way to show that thay are not. If the verb *-amo*, for instance, is a marker for intentional aspect, then it is likely to occur whenever such aspect is referred to. This, however, is not the case. Below I consider three examples of the verb *-amo* in different contexts.

(17)a. t-amo   t-ate   aya
1S-go   1S-bathe   water
'I am going to bathe.'

b. t-ate   aya   fo
1S-bathe   water   now
'I bathe now.'

(18)a. t-amo   t-aim   po-it
1S-go   1S-cook   thing-eatP[6]
'I am going to cook food.'

b. t-aim   po-it   fo
1S-cook   thing-eatP   now
'I cook food now.'

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[6] Verb stems that begin with *-a* drop this vowel in the first and second person plural: *t-ait* 'I eat', *p-iit* 'we eat; *t-ate* 'I bathe', *p-te* 'we bathe'. It is apparently the plural stem of 'to eat' which is compounded with *po* 'thing' to refer to 'food'.

(19)a. *y-amo y-kom   aam*
     3M-go 3M-write   letter
     'he goes and writes a letter.'

  b. *t-kom   fo*
     1S-write   now
     'I write now.'

(17a) was uttered by someone who was on her way to the river. Although the action of going was clearly undertaken, it can still be held that *-amo* here indicates something that is about to be done. If this is the case, then it should also be possible to utter (17a) when standing on the bank of the river or in it, just before actually bathing. However, in this situation, (17b) has to be used. Likewise, someone can utter (18a) only in a situation where he or she is actually moving towards a place where the cooking will be done. When the person is in the kitchen just before the act of cooking begins, (18b) is used. (19a) cannot be uttered when someone is already sitting at a desk, ready to begin writing. In that case, (19b) must be used.

Unlike constructions with the putative aspectual verbs, the valency-increasing constructions with *-o* 'fetch' can be taken at face value with regard to the number of actions that are expressed: in (9a) and (10a) above, it is clear that two actions are involved, namely fetching something and subsequently performing an action with that thing. This contrasts with *-kah*, another valency-increasing verb, in which an action is expressed which is probably best rendered in English as 'it with' or 'it to'. Thus, the literal translation for (9b) would be 'He fells the tree. It with an axe.' In Papuan languages, prepositional notions in English often manifest themselves as verbs (Foley 1986:114).

Likewise, in the expression *m-ehoh m-hai*, reference is made to two distinct actions (viz. 12): *-ehoh* alone is used in situations where an object is hit in an attempt to kill, but it does not imply that the object dies as a result of it. As such, *-ehoh* means 'hit' and *-hai* 'die' makes explicit that the object of *-ehoh* dies.

From a semantic point of view, for most putative serial constructions it can be demonstrated that each verb coincides with an individual predication. This is in agreement with the criterion for clauses given in (2b) above. At the same time, criterion (1d) for serial verbs, which stipulates that serial verbs refer to a single event, is violated. In addition, satisfaction of criterion (2b) implies violation of criterion (1c), which stipulates that there must be no ascertainable clause boundary between the two verbs. From a semantic point of view there are no formal criteria to distinguish between coordinating and subordinating constructions.

4.2 Intonation patterns

Although the criterion of intonation is by nature somewhat vague, since intonation patterns tend to change according to the length of the sentence and the speed with which it is said, it is nevertheless a useful notion in Maybrat. This is because there are two salient characteristics of clauses. First, the pitch rises on the last word of a clause followed by a very sharp drop, and second, there is a small pause between two clauses.

In this section, '/' indicates a small pause, and a grave accent a fall in pitch. That

intonation can be distinctive is demonstrated in the minimal pairs in the elicited examples in (20) and (21):

(20)a. *t-sam*   *t-aut*   *arà*
     1S-afraid   1S-climb   tree
     'I'm afraid to climb into the tree (=I don't dare).'

    b. *t-sàm* / *t-aut*   *arà*
       1S-afraid   1S-climb   tree
       'I'm afraid, and (so) I climb into a tree.'

(21)a. *t-ai*   *bola*   *m-amo fè*
     1S-hit   ball   3U-go NEG
     1. 'I throw the ball, but is does not go away'.
     2. 'I do not throw the ball away.'

    b. *t-ai*   *bolà* / *m-amo fè*
       1S-hit   ball   3U-go NEG
       'I throw the ball, but it does not go away.'

Without a falling intonation on the first verb in (20a) the only interpretation possible is that the second predication is a complement of the first (=main) predicate: *I'm afraid and climb the tree. In contrast, (20b) cannot have a single clause interpretation. It can be uttered when, for instance, a wild boar is nearby in the forest. Whereas (21a) is ambiguous with regard to the scope of the negative, (21b) is unambiguous, and can only be used when the ball is badly thrown, or when the ball is too heavy, which results in the ball not getting away (see also Section 3.4.1 below).

The examples in (22) - (24) have been taken from recorded texts.

(22)a. *m-fòt* / *m-amò* / *m-pèr*
     3U-catch   3U-go   3U-educate
     'They catch them and they go and educate them.'

    b. *m-amà* / *m-he*   *fanè*
       3U-come   3U-see pig
       'They come and see the pig.'

    c. *rae*   *m-ròs* / *m-o*   *wata*   *fò* / *m-e*   *aìt*
       man   3S-stand   3U-fetch   bownet DET 3U-give   3M
       'The people stand and now fetch a bownet and give it to him.'

Given that sudden falls in pitch and pauses between words are markers for clauses, the sentences in (22) are all multi-clausal.

In the expression *m-ehoh m-hai* 'she hits, it dies' the pitch generally drops sharply on the last syllable of *m-ehoh*, although a pause between the two is usually not perceived. Nevertheless, this suggests that in terms of intonation it consists of clauses.

Although these examples clearly seem to indicate intonational boundaries, it must be

noted that there are also a small number of counter-examples. In a stretch of fast speech, the following examples were found:

(23)a. *m-amo m-rof   y-anò*
   3U-go 3U-follow   3M-sibling.opposite.sex
   'They go and follow his sister.'

  b. *y-amo y-hoh   poo   r-àit*
    3M-go 3M-search   ceremonial.cloth   POS-3M
    'He goes and searches his ceremonial cloth.'

(24) *m-aut   hren   akàh*
   3U-climb   φ-sit   above
   'She climbs and sit above.'

There are no ascertainable clause boundaries in terms of intonation between *m-amo* and *m-rof* in (23a) and between *y-amo* and *y-hoh* in (23b). The presence or absence of intonational boundaries following motion verbs does not imply a semantic difference analogous to the one found between (20a) and (20b). On the other hand, there are also examples of coordinating constructions where there is no pause or fall in pitch between clauses in fast speech, as in (24).

Because no intonation-pattern that is unique to the putative serial verbs can be found, intonation provides no criteria to distinguish them from coordinating constructions.

4.3 Morphology

Verbs in serial constructions sometimes share a certain amount of morphology. Following (1e), in a serial verb construction only one of the verbs in the series is inflected. This type of morphology is demonstrated in the minimal pair in (25).

(25)a. *t-se   m-akus*
   1S-place   3U-leave.behind
   'I place it and it is left behind.'

  b. *t-se   akus*
    1S-place   leave.behind
    'I place it and leave it temporarily.'

When the second verb has its own subject prefix, as in (25a), this implies that an object is left behind, and will not be taken back. The construction in (25b), with the verb *akus* unprefixed, means that the thing that is left behind will be collected later.

The form *-rof* 'come after' occurs in (26a) with a subject prefix. It can also occur without a subject prefix, as in (26b) where *-rof* specifies in what way something is done. Likewise, in (26c) *-rof* indicates that the next finger is one immediately following the previous one, and not the finger after that.

(26)a. *n-atim,   t-rof*
    2-go.first   1S-follow
    'You go first, I will follow (you).'

  b. *y-no   rof   po   r-ira   ku   ait y-kias*
    3M-do   follow   thing   POS-just.now   child   3M   3M-tell
    'He does what the child just now told him.'

  c. *t-atem   krem   kro   rof*
    1S-hand   finger   φ-chase   follow
    'The finger that that follows after this (ringfinger).'

In (27a) *m-roh* means 'they descend'. It describes an action. In (27b), *-roh* means 'the lower part', indicating a part that is lower in altitude than the point of departure.[7] It modifies *m-amo* in that it says something about the direction of going. (27b) is more explicit than (27c).

(27)a. *m-amo m-roh   to-te   to   Mare*
    3U-go   3U-descend DEIC-below   DEIC   Mare
    'They go and descend, down to Mare.'

  b. *m-amo roh   to-te   to   Mare*
    3U-go   lower.part   DEIC-below   DEIC   Mare
    'They go to the lower part, down to Mare.'

  c. *m-amo to-te   to   Mare*
    3U-go   DEIC-below   DEIC   Mare
    'They go down to Mare'

Given that the sentences containing prefixless verbs in (25) - (27) are licit in Maybrat, one would suspect that analogous constructions with the putative serial verbs are also grammatical. This, however, is not the case, as indicated by (28) below:

(28)a. **y-amo   o   tfo*
    3SM-go   fetch   bush.knife

  b. **t-ai   bola   amo*
    1S-hit   ball   come

  c. **m-amo ate   aya*
    3U-go   bathe   water

  d. **m-ehoh   hai*
    3U-hit   die

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[7] *to-te* indicates the direction (*to*) where the sun sets (*te*).

The purpose of the examples in the present section is to demonstrate that sequences of verbs where one verb lacks a prefix, are possible. Thus, the constructions in (25b), (26b), (26c) and (27b) could be considered as serializing constructions, in contrast with constructions involving putative serial verbs, which do not allow bare stems as second verbs.

4.4 Syntax

Sebba (1987) demonstrates that several syntactic tests can be used to make the internal structure of sequences of verbs more transparent. Below, three such test will be applied: firstly, in Section 3.4.1, a negator is used in order to determine if its scope makes a difference between the putative serial verb constructions and coordinating constructions. Secondly, the objects of verbs in a sequence are extracted through relativisation (Section 3.4.2). In Section 3.4.3, finally, the coordinator *mati* is inserted between verbs in the sequences considered in this paper to find possible constraints.

4.4.1 Negation

If in a sequence of verbs each verb can be independently negated, then this is an argument to analyse the sequence as coordinating, because, apparently, each verb behaves as an independent entity. If it is not possible to negate the verbs independently, then this is a reason to analyse the sequence as a subordinating construction, where the scope of the negator is the entire sequence of verbs.

Consider the sentences below:

(29)a. *y-amo   y-ate   aya   fe*
      3M-go 3M-bathe   water   NEG
      1. 'He goes but he does not bathe'.
      2. 'He does not go and bathe.'

   b. *?y-amo fe   y-ate   aya*
      3M-go NEG   3M-bathe   water
      'He does not go and bathe.'

When asked what (29a) means, most people agree that a man goes, but that he does not bathe (reading 1.). When read with an intonation contour of a single sentence, (29b) is acceptable to only some, and rejected as odd by others. Those who accept it cannot stipulate what the scope of the negator is: whether it is *y-amo* or *y-ate* which is negated.

Other examples containing putative serial verb constructions are given below:

(30)a. *m-amo frok   m-ae   aof   mair   fe*
      3U-go φ-arrive   3U-at   sago   foot   NEG
      1. 'They go but do not arrive at the foot of the sagotree.'
      2. 'They do not go and arrive at the foot of the sagotree.'

   b. *m-amo frok   fe   m-ae   aof   mair*
      3U-go φ-arrive   NEG   3U-at   sago   foot
      'They go but do not arrive at the foot of the sagotree.'

(31)a. *t-ai*   *bola*   *m-amo*   *fe*
     1S-hit   ball   3U-go   NEG
     1. 'I throw the ball, but is does not go away.'
     2. 'I do not throw the ball away.'

   b. **t-ai*   *bola*   *fe*   *m-amo*
     1S-hit   ball   NEG   3U-go

(32)a. *y-fat*   *ara*   *m-kah*   *pam*   *fe*
     3M-fell   tree   3U-with   axe   NEG
     1. 'He fells the tree, but not with an axe.'
     2. 'He does not fell the tree with an axe.'

   b. **y-fat*   *ara*   *fe*   *m-kah*   *pam*
     3M-fell   tree   NEG   3U-with   axe

(33)a. *t-ehoh*   *fane*   *m-hai*   *fe*
     1S-hit   pig   3U-die   NEG
     1. 'I hit the pig but it does not die.'
     2. 'I do not kill the pig.'

   b. **t-ehoh*   *fane*   *fe*   *m-hai*
     1S-kill   pig   NEG   3U-die

(34)a. *t-sam*   *t-aut*   *ara*   *fe*
     1S-scared 1S-climb   tree   NEG
     'I am not scared to climb the tree.'

   b. *t-sam*   *fe*   *t-aut*   *ara*
     1S-scared NEG   1S-climb   tree
     'I'm not scared to climb the tree.'

In most cases, sentence-final negative creates an ambiguity, where the scope of the negator can be either the last predicate (cf. (30a) *frok m-ae aof mair*, reading 1.) or the entire sentence (cf. reading 2.). Reading 1. is the preferred interpretation. However, (34a) (repeated from (20a)), is unambiguous, the scope of the negator being the entire sentence. As such, this construction differs from those in (30) - (33). Note that (34a) and (34b) have the same meaning. When the negator is not sentence-final, as in (30b) and (34b), only one interpretation is possible: the scope of the negator is limited to the preceding predication. This interpretation is the same as the first interpretation of (30a). In other instances, non-final position of the negator is unacceptable, as demonstrated in the (b) variants in (31) - (33).

Negation of unambiguously coordinating constructions does not differ in scope or possible placement of the negator:

(35)a. *tupat   y-kait   spiah   fe*
φ-pick.up   3M-cover   shelter   NEG
1. 'He picks up (the leaves) but he does not cover the shelter.'
2. 'He does not pick up (the leaves) and cover the shelter.'

b. *tupat   fe   y-kait   spiah*
pick.up NEG   3M-cover   shelter
'He does not pick up (the leaves) and cover the shelter.'

(36)a. *tuo hren   t-kom   aam   fe*
1S φ-sit   1S-write   letter   NEG
1. 'I sit but I do not write a letter.'
2. 'I do not sit and write a letter.'

b. *?tuo   hren   fe   t-kom   aam*
1S   φ-sit   NEG   1S-write   letter
'I do not sit and write a letter.'

(37)a. *ara   m-tie   m-ai   tapam   fe*
tree   3U-break   3U-hit   ground NEG
1. 'The tree breaks but it does not hit the ground.'
2. 'The tree does not break and hit the ground.'

b. **ara   m-tie   fe   m-ai   tapam*
tree   3U-break   NEG   3U-hit   ground

(38) *m-ko   tafoh   saruk po-it   m-wian   aya   fe*
3U-burn   fire   φ-cook thing-eatP   3U-scoop   water   NEG
1. 'She does not burn a fire, does not cook food and does not scoop water.'
2. 'She burns a fire and cooks food but does not scoop water.'

(35) is analogous to (30) where the (b) variant, with the negative directly following the first verb, has the same meaning as Reading 2. of the (a) variant. In (36a) and (37a) Reading 1, where the scope of the negator is the predication that immediately precedes it, is the preferred interpretation. (36b) is analogous to (29b) above in terms of grammaticality: some accept it while others reject the sentence as odd. Like the (b) variants of (31) - (33), (37b) is unacceptable.

In coordinating constructions that contain more than two clauses, the interpretation under negation appears to be confusing. (38) is ambiguous, with interpretation 1., where the scope of the negator is the entire sentence, being the most common one. Placing the negator in different positions in this sentence, for instance after *mko tafoh* or *maim poit*, results in multi-clausal, hence irrelevant, sentences.

The ambiguities that arise under negation in the putative serial verb constructions are caused by the fact that the scope of the negator is unclear: the scope can either be the last verb, or the entire sentence. In coordinating constructions, however, the same ambiguity arises. There is one exception to this rule: In (34) above, the scope of the negator can only be the entire sentence. This suggests that the constituency of the sequence *t-sam t-aut*

differs from the rest. It is possibly subordinating, as opposed to the putative serial verbs, which behave in the same way as the coordinating sequences under negation.

4.4.2 Relativisation

Sebba (1987:65) indicates that movement processes, such as relativisation, can be used as syntactic tests for determining category membership. In Maybrat, in sentences that consist of one single predication, there are three positions that can be relativised, namely the subject, the object and the prepositional object. The constituent that is relativised on is extracted to the beginning of the sentence and the relativiser *ro* is placed in postnominal position. Consider:

(39)a. *fnia   m-ata   aya*
      woman 3U-drink   water
      'The woman drinks water.'

   b. *fnia   ro   m-ata   aya*
      woman REL   3U-drink   water
      'The woman who drinks water.'

   c. *aya   ro   fnia   m-ata*
      water REL   woman 3U-drink
      'The water that the woman drinks.'

According to Ross' coordinate structure constraint (CSC), in a coordinate structure, no conjunct may be moved, nor may any element be moved out of the conjunct (1967:89). If in Maybrat there is reason to distinguish between coordinating sequences of verbs on the one hand and serializing constructions on the other, then the CSC might be useful in distinguishing between the two.

In order to establish if the CSC applies in Maybrat to begin with, (14a), which is an example of a coordinating structure, is repeated below as (40a). Extraction of the object of *-fat* 'fell' or that of *-ai* 'hit' through relativisation yields (40b) and (40c) respectively.

(40)a. *y-fat   aof   m-tie   m-ai   tapam*
      3M-fell sagotree   3U-break   3U-hit   ground
      'He fells the sagotree and it breaks and hits the ground.

   b. *aof   ro   y-fat m-tie   m-ai tapam m-api mimo*
      sagotree REL   3M-fell 3U-break   3U-hit ground 3U-big very
      'The sagotree that he fells and it breaks and it hits the ground is very big.'

   c. *tapam ro   y-fat   aof   m-tie   m-ai*
      ground REL   3M-fell sagotree   3U-break   3U-hit

      hatat   m-siar
      muddy.place 3U-many

'The ground which the sagotree that he fells and it breaks and it hits is very muddy.'

It is demonstrated in (40b) and (40c) that in a coordinating construction the objects of verbs can be extracted without violating the grammaticality of the sequence of verbs.

Extracting the objects out of some putative serial verb-constructions yields the same results ((41a) is derived from (6); (42) from (8c); (43a) and (43b) from (9b)):

(41)a. *pam   ro   y-ros   y-o   m-api*
    axe   REL   3M-get.up   3M-fetch   3U-big
    'The axe that the man who gets up and fetches is big.'

(42)   *bola   ro   rae   y-ai   m-ama   m-api*
    ball   REL   man   3M-hit   3U-come   3U-big
    'The ball that the man throws towards me is big.'

(43)a. *ara   ro   y-fat   m-kah   pam   m-api*
    tree   REL   3M-fell 3U-with   axe   3U-big
    'The tree that he fells with an axe is big.'

  b. *pam   ro   m-kah   y-fat   ara   samuoh*
    axe   REL   3U-with   3M-fell   tree ϕ-heavy
    'The axe that he fells the tree with is heavy.'

Likewise, *fane* can be extracted from the construction *m-ehoh m-hai* as shown in (44).

(44)   *fane   ro   t-ehoh   m-hai   m-api*
    babi   REL   1S-hit   3U-die 3U-big
    'The pig that I hit and it dies is big.'

These data indicate that there are no differences between the putative serial verb constructions and the coordinating constructions when objects are extracted through relativisation. As such, this test provides no formal criteria to distinguish between two types of construction.

4.4.3   Insertion of an overt coordinator

In a coordinate structure, the linguistic units that are coordinated are of equivalent linguistic status. As such, it should be possible to place a coordinator between these units. In Maybrat, the coordinator *mati* 'and.then' expresses sequence of actions and is found between two units of equal syntactic status.

Examples of coordinated sequences of verbs (derived from (13a), (14a) and (35a) above) are given below:

(45)   *n-atim   mati   t-rof*
    2-lead   and.then   1S-follow
    'You lead, and then I follow.'

(46)   *y-fat   aof   mati   m-tie   m-ai   tapam*
        3M-fell sagotree   and.then   3U-break   3U-hit   ground
        'He fells the sagotree, and then it breaks and hits the ground.

(47)   *tupat   mati   y-kait   spiah*
        φ-pick.up   and.then   3M-cover   shelter
        'He picks up (the leaves) and then he covers the shelter.'

Given that *mati* can be placed between two units that have equal status, the sequences of verbs in (45) - (47) above appear to be coordinated sequences indeed. The coordinator *mati* can also occur between verbs in most putative serial verb constructions and valency-increasing constructions without violating the grammaticality of a sentence. Some examples appear below:

(48)   *m-amo mati   m-fat   aof*
        3U-go and.then   3U-fell   sagotree
        'They go and then they fell a sagotree.'

(49)   *y-ros   mati   y-o   pam*
        3M-get.up   and.then   3M-fetch   axe
        'He gets up and then he fetches an axe.'

(50)   *n-o   tfo   mati   n-e   tuo*
        2-fetch bush.knife   and.then   2-give   1S
        'Fetch a bush-knife and give it to me.'

(51)   *t-ehoh   fane   mati   m-hai*
        1S-hit   pig   and.then   3U-die
        'I hit the pig and then it dies.'

There are also constructions where *mati* cannot occur between the verbs without violating the grammaticality of the construction. These involve bare-stem second verbs, as in (25) - (27) above. Consider the ungrammatical variants in (52) and (53):

(52)   **t-se   mati   akus*
        1S-place   and.then   leave.behind

(53)   **y-no   mati   rof   po   r-ira*
        3M-do and.then   follow   thing   POS-just.now

        ku   ait y-kias
        child   3M 3M-tell

This type of construction accomodates criterion (1a) above. This provides, in addition to the morphological criteria that were found in Section 3.3 above, reason to regard these constructions as possible serial verb constructions.

5 Conclusion

The purpose of this paper was to find if in a description of Maybrat, a formal distinction should be made between subordinating, or serial, constructions on the one hand, and coordinating constructions on the other. In each section above, some putative serial verb constructions and unambiguously coordinating constructions were compared from several points of view in an attempt to find constrasts. Semantic, phonological, morphological and syntactic evidence presented above does not indicate a clear contrast, except for, firstly, a few cases with second verbs as bare stems and secondly, a construction involving the verb -*sam* 'be afraid'. Constructions analogous to the latter are frequent in Maybrat, and are subject to further research. The exceptions found, however, do not involve the clear candidates that are discussed in the literature on verb serialization.

Abbreviations

DEIC	-	Deictic element
DET	-	Determiner
M	-	Masculine
NEG	-	Negator
P	-	Plural
REL	-	Relativiser
S	-	Singular
U	-	Unmarked

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