

Serial Verbs and Propositions in White Hmong

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Serial verbs are a well-known feature of many languages spoken in East and Southeast Asia, West Africa, and Papua New Guinea, as well as of some Creole languages. An important issue in the study of serialization is the relationship between the number of verbs and the number of separate propositions expressed, with each proposition assumed to represent a separate event, action, or state of being. Some linguists, such as Filbeck (1975) and Noonan (1985), assign a single propositional structure to all serial constructions. Filbeck argues that verb serialization in Thai is sub-propositional rather than propositional, in the sense that the first verb in the series "carries the true predicate meaning of the proposition", with subsequent verbs expressing "a functional meaning which is related to the predicate or propositional meaning of the initial verb" (119). Noonan, who looks at serialization crosslinguistically, considers all serial constructions to represent single assertions and uses this as one criterion for differentiating serial from paratactic constructions, which represent more than one assertion.

In contrast, Li and Thompson (1981) classify Chinese verb concatenations standing for more than one separate event or state of affairs as serial constructions, although they state that the individual events are interpreted as related parts of a larger single situation. Sebba (1987) discusses serialization in Sranan, a Creole language, distinguishing between constructions arising from VP coordination, which represent more than one action, and subordinating serial constructions, which represent a single action but which may involve several motions.

Some studies assign propositional structure according to the particular functions which a given type of serial construction serves. For example, Stahlke (1974) suggests that some Yoruba serial verbs, such as those meaning 'accompany' and 'use', are best analyzed as adverbs expressing accompaniment and instrumental functions rather than as verbs belonging to separate VPs. This means that they would not represent separate propositions. Li, Harriehausen and Litton (1986) consider serial constructions expressing 'motion in a direction' in Green Hmong always to represent single propositions, with the direction verb in the series operating as a function word.

In short, there are a number of different approaches to the question of the relationship between the number of verbs and the number of propositions. There is a tendency, however, to analyze those serializations which translate as verb + adverbial into English as representing single propositions.

This paper takes a different tack. I argue that in White Hmong, the interpretation of the number of propositions expressed by a serial construction ultimately depends on lexical and pragmatic factors. That is, when the lexical content of the individual serial verbs apparently serving an adverbial function is considered in detail, it can be seen that they are not fully grammaticized as adverbial function words. Rather, in many such concatenations, each verb can contribute its prototypical verbal sense and thus be interpreted as representing a separate proposition, depending on the larger linguistic and situational contexts in which it occurs. It is noteworthy that in his discussion of other aspects of serialization in Lahu, Matisoff (1969) draws attention to the importance of detailed lexical analysis in understanding the syntactic structure of concatenated verbs.

I will begin with a discussion of the 'motion in a direction' type of serial construction discussed by Li et al. for Green Hmong, a dialect very closely related to White Hmong. The White Hmong equivalent of their example 5 is given below:

1. Nws ua luam dej hla tus hav dej lawm.1  
 3sg swim cross cl stream perf  
 'S/he swam across the stream.'

Li et al. claim that in the Green Hmong equivalent of this sentence, *ua luam dej* 'swim' represents an action and *hla* 'cross' the direction of motion, with the two verbs together expressing a single proposition.

For this White Hmong sentence given in isolation, their claim seems valid. However, *hla* in White Hmong does not act as a function word with a purely directional sense in all such serial constructions. Moreover, substitution of a different "direction" verb and use of this serial construction within other syntactic structures and various situational contexts affects the interpretation of the number of separate propositions expressed.

Consider first how the meaning of *hla* compares with that of a similar "direction" verb *dhau*. In example 2, *dhau* 'cross over' is substituted for *hla*, 'cross.'<sup>2</sup> In addition, for the NP *tus hav dej* 'stream' is substituted the NP *tus dej* 'river', which is more appropriate for the verb *dhau*. (This point will be elaborated below).

2. Nws ua luam dej dhau tus dej lawm.  
 3sg swim cross-over cl river perf  
 'S/he swam across the river.'

*Dhau* differs from *hla* in that the latter focuses on the action or process of crossing per se, and can be considered an activity verb in Vendler's (1967) sense, while *dhau* stresses the attainment of the end result and is an accomplishment verb. It has a more perfective sense than *hla*. Note that this is independent of the perfective marker *lawm*, which occurs in both sentences. This difference in meaning shows that these verbs are not pure function words in the given serial constructions.

Another piece of evidence is the behavior of yes-no questions, which are formed by placing the question marker *puas* before a verb. As 3 and 4 show, this question marker can occur before the first verb in the series with either *hla* or *dhau* as the second verb.

3. Koj *puas* *ua luam dej hla lawm?*  
 2sg. Q swim cross perf  
 'Will you swim across?'
4. Koj *puas* *ua luam dej dhau lawm?*  
 2sg. Q swim cross-over perf  
 'Will you swim across?'

If the entire serial construction in each case could represent only a single proposition, we would expect the question marker *puas* only to be permitted before the first verb in the series, as in 3 and 4, questioning the pair of verbs combined. However, as 5 shows, *dhau* can be independently questioned, with *puas* placed immediately before it.

5. Koj *ua luam dej puas dhau lawm?*  
 2sg swim Q cross-over perf  
 'Can/will you swim across?'

Each of the sentences in 3, 4, and 5 has a slightly different sense. 3 is a relatively neutral question about whether swimming across a small body of water will take place. No particular difficulty is involved which might lead one to question final accomplishment. Swimming is questioned as a means of crossing the river. Sentence 4 is more goal-oriented than 3, since the verb *dhau* conveys a strong sense of accomplishment. This is probably why *dhau* in 4 is more compatible with *tus dej* 'river' as the object NP, since crossing a river is a larger task than crossing a small stream. However, the primary focus of the question is still on the general event of swimming. This contrasts with a typical possible context for 5, where two people are in the process of swimming across the river, and the questioner asks whether the addressee is going to be able to make it all the way to the other side. Another possible context for 5 is that the questioner knows that the addressee has managed to cross the river by swimming in the past, but this time there is reason to question whether s/he can make it across, perhaps because the river has been swollen by heavy rain. In each context, the specific concept being questioned is whether the addressee will be able to reach the termination point. Thus sentence 5 is even more goal-oriented than 4.

In contrast to *dhau*, when *hla* appears as the second verb in the series, it cannot be independently questioned, as shown in 6:

6. \*Koj *ua luam dej puas hla lawm?*  
 2sg swim Q cross perf

Perhaps this sentence is semantically and pragmatically odd because if the notion of making a crossing is to be emphasized over swimming in a given sentence, it is more appropriate to use the other available lexical item, *dhau*, which inherently focuses on the accomplishment of crossing. This analysis is supported by the existence of sentence 7, where *hla* and *dhau* are both used. (In this sentence the future marker *yuav* is used to make the example more pragmatically natural.)

7. Koj hla puas yuav dhau?  
 2sg cross Q future cross-over  
 'Can you get across?'

This question would be asked before any swimming had taken place. Here, *hla* contributes the process sense of crossing and *dhau* the proceeding to a terminal point, which is the notion being questioned.

These facts show that contrary to Li et al.'s claim for Green Hmong, in White Hmong a so-called direction verb in a motion and direction series can be interpreted as representing a separate event, and therefore, a separate proposition.

The relationship between the meanings of these verbs and the number of propositions expressed can be considered in terms of prototype theory. Typically, a crossing by swimming episode would be viewed as a single event unless specific factors such as considerable distance or rapids call into question achievement of the goal. In general, it would serve no practical purpose or communicative function to separate out the parts of the overall situation into different events. This seems to be the typical case where *hla* is used as the second verb in the series.

The fact that *hla* can also be used as the only verb in a relatively neutral question such as 8 shows that it does not have a purely directional sense, however, and that it can represent an individual act, depending on the context of use.

8. Koj hla li cas?  
 2sg cross how  
 'How did you cross?'

When there are special conditions surrounding the swimming across, *dhau*, is more appropriate in the serial construction, which is then open to interpretation as representing more than one proposition, given the right context. Consider again example 2:

2. Nws ua luam dej dhau tus dej lawm.  
 3sg swim cross-over cl river perf  
 'S/he swam across the river.'

Here, there is a suggestion that perhaps some difficulty, such as great distance, rapids, or ambush had to be overcome. It is somewhat like saying in English, 'S/he swam and made it across'.

This contrasts with example 9,

9. Nws dhau tus dej lawm.  
 3sg cross-over cl river perf  
 'S/he crossed the river.'

which does not convey a sense of danger or difficulty. Thus the notion of difficulty is not an inherent part of the meaning of *dhau*. I suggest that it is an implicature arising from the fact of the juxtaposition of the two verbs, *ua luam dej* 'swim' and *dhau* 'cross over.' Since it is possible to describe the fact of crossing with *dhau* alone, a serial construction with two verbs places a certain emphasis on the two different phases of the situation, and since *dhau* lexically emphasizes accomplishment in a way that *hla* does not, one can infer that the accomplishment was not automatic.

Another case of a motion and direction sequence discussed by Li et al. for Green Hmong is shown in 10 in its White Hmong translation, where the variant with *los* indicates motion toward the speaker, and with *mus* away from the speaker:

10. Lawv nce nkag mus.  
 3pl. climb enter come/go  
 'They climbed in.'

Again, they claim that the entire serial construction in the Green Hmong sentence represents a single proposition of movement in a particular direction. Again, this seems to be the case for this particular example, with *nkag mus* and *nkag los* interpreted as single words translatable here as 'in'. However, at least in White Hmong, in other contexts it is possible to separate the activity of climbing from the activity of entering, as in 11, where *nkag* 'enter' is independently negated.

11. Lawv nce tab sis lawv tsis tau nkag.  
 3pl climb but 3pl not attain enter  
 'They are climbing up but they haven't entered yet.'

This suggests that in contexts where there is no particular communicative purpose served in breaking down the situation into separate actions or phases, as in 10, there is a tendency to interpret the serial construction as expressing a single proposition, but if special circumstances exist, such as in a possible context for 11 where some snafu occurred to delay or prevent the entering, the verbs can be interpreted as representing separate propositions.

Moreover, the first verb in the series can take independent attainment and perfective aspect markers, as shown in 12:

12. Lawv tau nce lawm tab sis lawv tsis tau nkag.  
 they attain climb perf but they not attain enter  
 'They climbed up but they didn't enter.'

Instrumental expressions are another common type of serial construction which linguists tend to analyze as representing single propositions. Typically, a verb meaning 'use', 'take' or 'hold' is said to express the instrumental function, followed by a second verb describing the purpose to which the instrument is put. An example is given in 13, which is from a brief survey of serial verbs in Hmong by Owensby (1986) with a slightly modified gloss and translation. Past time reference as implied by the attainment aspect marker *tau* has been added to make the sentence more natural.

13. Tus neeg caum nqaij tau xuas phom tua tus noog.  
 cl hunter attain grasp gun kill cl bird.  
 'The hunter killed the bird with a gun.'

It is possible to use other verbs, namely *muab* 'take' and *siv* 'use', in this context as well, as shown in 14 and 15:

14. Tus neeg caum nqiaj tau muab phom tua tus noog.  
 cl hunter attain take gun kill cl bird.  
 'The hunter killed the bird with a gun.'

15. Tus neeg caum nqaij tau siv phom tua tus noog.  
 cl hunter attain use gun kill cl bird.  
 'The hunter used a gun to kill the bird.'

Each verb contributes its own sense, which is not strictly instrumental. *Xuas* and *muab* are somewhat similar in that both allow either of two background assumptions: that the agent already had the instrument (here, a gun) in hand, or else that the agent had to get it. However, there seems to be a tendency for *muab* to be preferred to *xuas* for indicating obtaining the instrument, although this depends on the context. With *siv*, on the other hand, the implication is that the gun was already in hand. *Siv* puts strong focus on the notion of utilization, while *xuas* and *muab* emphasize the handling of the gun. In command contexts as in 16-17, *muab* and *xuas* imply that the addressee does not have the gun in hand and needs to go get it, although in other contexts it may be that the gun is already in hand.

16. Muab rab phom tua noog.  
 take cl gun kill bird.  
 'Kill a bird with the gun.'
17. Xuas rab phom tua noog.  
 grasp cl gun kill bird.  
 'Kill a bird with the gun.'

With *siv* the opposite is the case: it is implied that the

gun is already in hand.

18. Siv rab phom tua noog.  
use cl gun kill bird.  
'Use the gun to kill the bird.'

Also, sentence 18 has a purpose sense not salient in 16 and 17. Thus in certain contexts, *muab* and *xuas* can represent events separate from that of the following verb, while *siv* tends not to. In 19 and 20,

19. Koj tau xuas/muab dabtsi tua tus noog?  
2sg attain grasp/take what kill cl bird  
'What did you kill the bird with?'
20. Koj tau siv dabtsi tua tus noog?  
2sg attain use what kill cl bird  
'What did you kill the bird with?'  
'What did you use to kill the bird?'

there appears not to be a sharp difference of interpretation regarding the number of events, although *siv* in 20 focuses more on the carrying out of the shooting, in either of the two readings, and the other two verbs on the taking of the gun. Notice that the question is directed only toward the proposition expressed by the verb taking the instrument NP as its object rather than toward that of the combined pair of serial verbs.

Further indication of how *siv* in particular focuses on utilization can be seen in the interchange in 21 and 22:

21. Vim li cas nws thiaj li tau siv phom tua tus noog?  
why 3sg so attain use gun kill cl bird  
'Why did s/he use a gun to kill the bird?'
22. Vim tias nws tsis muaj hneev.  
because 3sg not have crossbow  
'Because s/he doesn't have a crossbow.'

21 asks about the instrument used and is not interpreted as "Why did s/he shoot the bird?" 22 is an appropriate response.

To summarize, *siv* has a utilization sense not salient in *xuas* and *muab*. It usually seems to be interpreted as representing a single proposition along with the second verb in the series. However, there is a certain sense of separability, in that the serial construction in 21 does not simply mean 'shoot the bird'. An even stronger separation is apparent in 23, where *siv* is negated and *tua* 'kill' is not within the scope of negation.

23. Nws tsis tau siv phom tua noog. Nws ruab hluas xwb  
3sg not attain use gun kill bird 3sg snare jus  
'S/he didn't use a gun to kill the bird. S/he just snared it.'

Thus 23 implies that s/he did, in fact, kill the bird. In order to convey that the bird was not killed, a different structure, that of 24, would be used.

24. Nws tua tsis raug tus noog.  
 3sg shoot not get cl bird  
 'S/he shot at but didn't get the bird.'

The use of adverbs provides additional evidence. *Muab* can be modified by a manner adverbial, as *majmam* 'carefully' (or 'slowly') in 25. An adverb might be used to modify *xuas* in a particular context, but this is less acceptable in general than for *muab*.

25. Nws majmam muab/??xuas phom tua noog.  
 3sg carefully take/grasp gun kill bird  
 'S/he carefully shot the bird.'

However, as 26 shows,

26. \*Nws majmam siv phom tua noog.  
 3sg carefully use gun kill bird

*majmam* cannot be used with *siv* in this context. This may be because the manner is more relevant to the way the gun is taken and aimed than to the fact of gun use as indicated by *siv*.

That lexical meaning and the specific context of use are important to the interpretation of the serial construction as indicating only one or more than one proposition is also shown in 27-28.

27. Nws tau xuas yuam sij qhib qhov rooj lawm.  
 3sg attain grasp key open door perf  
 'S/he opened the door with a key.'
28. Nws tau muab yuam sij qhib qhov rooj lawm.  
 3sg attain take key open door perf  
 'S/he opened the door with a key.'

*Xuas* seems to be polysemous, with a 'grope' sense as well as a 'grasp' or 'hold' sense. In 27, if the context is that the person had to grope for the key (e.g. in a purse or in the dark), then *xuas* represents a separate action from *qhib* 'open', and therefore a separate proposition. If it is taken in its other meaning of 'hold', however, 27 implies that the key was already in hand. *Muab*, in 28, can also have two interpretations. It is important to note, however, that *xuas* and *muab* are not interchangeable. If no groping is involved and the key simply needs to be taken from a table, for example in full light, then *muab* is preferred over *xuas*. Thus *muab* is the verb most likely to represent a separate proposition, *xuas* somewhat less, and *siv*, the



least, but the linguistic and pragmatic contexts are critical in this determination.

Another important factor on which I have not explicitly focused thus far is that whether a given verb represents a separate proposition in a certain context depends partly on what other lexical items could be substituted. For example, *muab* in 29 seems to have a stronger sense of separation from the second verb as indicated by the translation, than it does in some other contexts.

29. Nws tau muab khob dej haus lawm.  
3sg attain take cup water drink perf  
'S/he took the cup of water and drank.'

I believe that this may be because another verb, *tuav*, is available which explicitly emphasizes the act of holding. Thus sentence 29 implies that the child actively took the cup by him/herself from somewhere, while with *tuav*, as in 30,

30. Tus menyuam tau xyau tuav khob dej haus.  
cl child attain try hold cup water drink  
'The child tried to drink from a cup.'

the idea is that someone had already given the child the cup.

It is instructive also to see how *siv* 'use' behaves in an abstract instance of the "instrumental" structure:

31. Nws tau siv zog ntov ntoo.  
3sg attain use strength cut tree  
'S/he used all his/her strength to  
cut down the tree.'

An appropriate context for 31 is where the person is not necessarily inherently strong, but s/he used all available strength to perform the task. Again, *siv* contributes its own utilization sense and is not a pure function word. Moreover, *muab* 'take' and *xuas* 'grasp' would not be used here because their literal semantic content is incompatible with the context. Another verb, *muaj* 'have', can be used, but the resulting sentence has a completely different meaning:

32. Nws muaj zog ntov ntoo heev.  
3sg have strength cut tree very  
'S/he has the strength to cut down the tree.'

32 implies that the person is inherently strong, obviously stemming from the literal meaning of *muaj* as 'have'.

The last example I will discuss is perhaps the most problematic for an approach equating number of propositions with a functional category. Consider 33, which is from a Kmong folk tale (Johnson, 1981:19):

33. Nws txiav nroj pov tseg.  
 3sg cut weed throw away  
 'S/he cut down the weeds.'  
 'S/he cut down the weeds and threw them away.'

This sentence can be interpreted as expressing one proposition or two depending solely on the pragmatic context. If the weeds in question were cut and allowed simply to lie where they fell, like grass, then the serial construction has the first interpretation given above and it represents a single proposition. However, if the weeds were cut down and then picked up and discarded somewhere else, then it has the second interpretation, which represents two separate propositions.

What I have attempted to show is that interpretation of propositional structure cannot simply be correlated with a general functional category. It is necessary to consider in depth the semantics of each relevant word and the linguistic and pragmatic contexts.

I suggest that in some real life situations the subcomponents of an event, such as that of swimming across a stream, are typically so closely intertwined that there is no practical reason to separate them. In other words, there is a prototype for the event which encourages interpretation of the serial construction as representing a single event and therefore a single proposition. However, when there is a departure from that prototype, then the same set of serial verbs can be interpreted as representing more than one event and therefore, more than one proposition.

This is similar to Bruce's (1988) analysis of Alamblak (Papua New Guinea) serial verb constructions, which he argues fall on a continuum between lexical items, representing the closest association of ideas and conventionally taken to represent a single event, and discourse in general, which restricts the sequencing of separate ideas by the principle of relevance. Serial constructions are more constrained than sequences of separate clauses since the former "must relate only events which are somehow conceived as notably more commonly associated together in experience or those events which form a culturally important concatenation of events. These events, while transparently individuated, are conceived of as a single unitary event" (28). It is different, however, in that Alamblak has the alternative of expressing the same factual information in juxtaposed clauses which differ syntactically from serial constructions, while Hmong does not. Thus Hmong serial constructions themselves can be interpreted as representing one or more events, and therefore one or more propositions, depending on semantic and pragmatic factors.

## Notes

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<sup>1</sup>A standard Hmong orthography, the Romanized Popular Alphabet, is used here, with the final consonants representing tones. Compounds have spaces between those morphemes which can also be individual words. 'Cl' stands for classifier, 'Q' for question marker, and 'perf' for perfective marker.

It should be noted that there is some native speaker variation in the translation of *hav dej*. Also, in example 1 I have added the perfective marker *lawm*, which in some contexts implies past time reference, as this makes the example more comparable to some of the others I will discuss. Hmong does not have past tense marking per se, although past time reference is often implied by the use of the word *tau*, which Li (1989) considers to function as an attainment aspect marker when occurring before the main verb. It can also be used as a transitive verb meaning "get," "attain" or "reach." (The use of *tau* after the main verb to express ability is irrelevant here.) In this paper *tau* is glossed as the word "attain" in all contexts, as the difference between the use as an aspect marker and as a verb is not always clear cut. Similar items are found in Thai and other Southeast Asian languages (See also Clark, 1982). There is a future marker *yuav*, but not all sentences with future time reference require it. In the examples given in this paper, time reference is expressed in various ways based on a complex interaction of temporal marking, the lexical meanings of verbs, and context. Contexts are discussed to the extent necessary to make the points about serialization, but not fully specified to make clear the translation of time reference. In each case, time reference was translated in the way that seemed most natural for the given situation to the native speakers consulted. The problems in translating time reference do not affect the conclusions about verb serialization.

<sup>2</sup>Heimbach's (1979) White Hmong-English Dictionary translates *dhau* as 'through', 'pass through', 'beyond', and *hla* as 'cross over', 'go across'. However, the glosses used in this paper are more appropriate for the contexts under consideration. It should be kept in mind throughout the paper that the glosses are only approximate, and sometimes even slightly misleading, since

English often has no exact equivalent.

*Def* literally means 'water'. When preceded by the classifier *tus* it refers to a river.

#### References

- Bruce, Les. 1988. "Serialization: From Syntax to Lexicon." *Studies in Language*, Vol. 12, No. 1.
- Clark, Marybeth. 1982. "Some Auxiliary Verbs in Hmong." Bruce T. Downing and Douglas P. Olney, eds. *The Hmong in the West*. Minneapolis: Southeast Asian Refugee Studies Project, Center for Urban and Regional Affairs, University of Minnesota.
- Filbeck, David. 1975. "A Grammar of Verb Serialization in Thai." In Jimmy G. Harris and James R. Chamberlain, eds. *Studies in Tai Linguistics in Honor of William J. Gedney*. Bangkok: Central Institute of English, Office of State Universities.
- Heimbach, Ernest E. 1979. *White Hmong - English Dictionary*. Ithaca: Southeast Asia Program, Cornell University.
- Johnson, Charles, ed. 1981. *Thawj Tug Tub Ua Qoob Ua Loo (The First Farmer - Why Farmers Have to Carry Their Crops; Level 1.)* Vang Lo, storyteller; Written Hmong by Vang Lo and Se Yang. St. Paul: Linguistics Dept., Macalester College.
- Li, Charles. 1989. "The Aspectual System of Hmong." XXII International Conference on Sino-Tibetan Languages and Linguistics. University of Hawaii at Manoa.
- Li, Charles, Bettina Harriehausen and Donald Litton. 1986. "Iconicity: A View from Green Hmong Serial Verbs". Conference on Southeast Asia as a Linguistic Area. University of Chicago.
- Li, Charles and Sandra Thompson. 1981. *Mandarin Chinese: A Functional Reference Grammar*. Berkeley: University of California Press.
- Matisoff, James. 1969. "Verb Concatenation in Lahu: The Syntax and Semantics of 'Simple' Juxtaposition." *Acta Linguistica Hafniensia* 12.1:69-120.
- Noonan, Michael. 1985. "Complementation". In Timothy Shopen, ed. *Language Typology and Linguistic Description*. Cambridge: Cambridge University Press.

- Owensby, Laurel. 1986. "Verb Serialization in Hmong". In Glenn L. Hendricks, Bruce T. Downing, and Amos S. Deinard, eds. *The Hmong in Transition*. New York: Center for Migration Studies of New York, Inc. and the Southeast Asian Refugee Studies of the University of Minnesota.
- Sebba, Mark. 1987. *The Syntax of Serial Verbs*. Amsterdam: John Benjamins.
- Stahlke, Herbert. 1974. "Serial Verbs as Adverbs: A Reply to Paul Schachter". *Studies in African Linguistics*, Supplement 5.
- Vendler, Zeno. 1967. "Verbs and Times". In *Linguistics in Philosophy*. Ithaca: Cornell University Press.