

On the form of complex predicates: toward demystifying serial verbs

Masayoshi Shibatani

1. Introduction*

As the recent volume edited by Aikhenvald and Dixon (2006) indicates, interest in verb serialization or serial verb constructions (SVCs hereafter) persists. Indeed, the question of how serial verbs differ from other types of complex predicates such as converbial complex predicates and verb compounds, as well as other multi-verb constructions like coordination and subordination, remains one of the outstanding questions in both formal and typological studies. This paper, by critically examining the widely held current characterizations of SVCs, attempts to remove some of the misconceptions surrounding serial verbs. In particular, we focus on the similarities between serial verbs and converbial complex predicates containing a non-finite marker, and argue that they are not distinct types of complex predicate, contrary to the claims made in the recent literature on SVCs. While space limitation prevents us from developing it further, our discussion of SVCs, in particular the functional aspect of the predication of these constructions, benefits greatly from some of Christian Lehmann's earlier work (e.g., Lehmann 1989) on the typology of clause linkage. I thus find it fitting that I contribute this paper as a token of the great admiration that I hold with regard to Christian's many seminal works in modern linguistic typology.

As seen in the following characterization of SVCs by Aikhenvald (2006), the current definitions of SVCs such as Foley and Olsen (1985), Bisang (1995), and Bril (2004) typically refer to the four defining properties summarized in (1) below:

[An SVC] is a sequence of verbs which act together as a single predicate, without any overt marker of coordination, subordination, or syntactic dependency of any other sort. Serial verb constructions describe what is conceptualized as a single event. They are monoclausal...SVCs may also share core and other arguments. Each component of an SVC must be able to occur on its own right. (Aikhenvald 2006: 1)

- (1) a. There is no intervening conjunction, linker, or a non-finite marker between two or more verbs.¹
 b. Each of the serialized verbs occurs in its “own right” in non-serial context.
 c. Serialized verbs form a single predicate of a single clause.
 d. Serialized verbs typically share arguments.

SVCs with these properties are said to form “a clearly recognizable, robust construction type” (Dixon 2006: 338), but are generally thought to be somewhat mysterious, hence attracting so much attention in the field. If serialized verbs satisfied property (1b) and (1c) above simultaneously, they would indeed form an unusual construction because these two properties are contradictory (see section 3 below).

Shibatani and Huang (forthcoming), to the best of our knowledge, is the first attempt to critically examine the defining properties of SVCs in an effort to unravel some of the myths surrounding SVCs. In the first place, they have shown that property (1a) does not hold in SVCs of certain Formosan languages. For example, while SVCs in the Wulai dialect of Atayal do not have a linker, those in the Mayrinax dialect do in the form of $\square i \square$, as shown in (3) below:

- (2) Wulai Atayal
m-wah=ku? *m-ita?* *yaya?=su?*
 AF-come=1SG.NOM AF-see mother=2SG.GEN
 ‘I came to see your mother.’

- (3) Mayrinax Atayal
wah-an *ʔi?* *m-itaal ni?* *yumin* *ʔi?* *yaya=nia?*
 come-LF LK AF-see GEN Yumin NOM mother=3SG.GEN
 ‘Yumin came to see his mother.’

Paiwan and Changpin Amis are two other Formosan languages that include a linker in their SVCs – obligatorily in the former and optionally in the latter. Shibatani and Huang (forthcoming) arrive at their conclusion that these constructions with a linker are indeed SVCs on the basis of the fact that they obey the same syntactic restrictions that govern SVCs without a linker. The relevant restrictions include the following:

- (4) a. Focus marking in the second verb is either default AF (actor focus) or harmonizing with that of the first verb.²
 b. The second verb does not host a pronominal clitic.
 c. The second verb cannot be negated.
 d. The second verb cannot be marked for mood.

These properties of the second verb (and others following the initial one) of SVCs distinguish serial constructions from other multi-verb constructions such as coordination and subordination, where these restrictions do not hold.

2. Converbal complex predicates

The conclusion by Shibatani and Huang (forthcoming) that SVCs may contain a linker leads to the question whether converbal complex predicates seen in Japanese, Korean, and Altaic languages at large are also SVCs. These complex predicates appear at least functionally similar to the regular SVCs, as the parallel expressions below indicate:

- (5) a. Asante SVC³ (Niger-Congo)
ɔfa-a huma=no bra-a ha
 3SG-take-PST book=DET come-PST here
 'He brought the book here.'
- b. Japanese converbal complex predicate
Kare=ga koko=ni hon=o mot-te ki-ta.
 he=NOM here=DAT book=ACC take-CON come-PST
 'He brought the book here.'
- (6) a. Mandarin Chinese SVC
tā zǒu qù le.
 she walk go ASP
 'She went walking.'
- b. Korean converbal complex predicate
Kunye=nun kel-e ka-tta.
 she=TOP walk-CON go-PST
 'She went walking.'

In the Japanese grammatical tradition, the converbal ending *-te*, glossed as CON above, is treated as a conjunctive particle since it also conjoins two clauses as below:

- (7) Japanese
- a. *Taroo=ga gitaa=o hii-te,*
 Taro=NOM guitar=ACC play-CON
Hanako=ga utat-ta.
 Hanako=NOM sing-PST
 ‘Taro played the guitar and Hanako sang.’
- b. *Yuki=ga hut-te, kion=ga*
 snow-NOM fall-CON temperature-NOM
saga-ru sooda.
 drop-PRS HERESAY
 ‘They say that it will snow and that the temperature will drop.’

While these constructions above clearly involve two clauses, there is evidence that the constructions in (5b) and (6b) are monoclausal, indicating that the two verbs connected by the converbal ending (Japanese *-te* and Korean *-e/-ko*) form a single complex predicate similar to serialized verbs. For example, whereas biclausal conjunctive structures of the type seen in (7) obey Ross’s constraint against extracting an element from one conjunct of a coordinate structure, those with a converbal complex predicate do not (see Shibatani (2007) and Shibatani and Chung (2007) for more evidence and further discussions on this point). Observe:

- (8) Japanese
- a. *Taroo=wa tegami=o kai-te, gakkoo=ni it-ta.*
 Taro=TOP letter=ACC write-CON school=DAT go-PST
 ‘Taro wrote a letter and went to school.’
- b. **[Tagoo=ga Ø kai-te, gakkoo=ni it-ta] tegami*
 Taro=NOM write-CON school=DAT go-PST letter
 (lit) ‘the letter that Taro wrote and went to school’
- (9) Japanese
- a. *Taroo=wa tegami=o kai-te it-ta.*
 Taro=TOP letter=ACC write-CON go-PST
 ‘Taro went away having written a letter.’

- b. [Taroo=*ga* ∅ *kai-te* *it-ta*] *tegami*
 Taro=NOM write-CON go-PST letter
 (lit) ‘the letter that Taro wrote and went away’
 ‘the letter that Taro wrote and left behind’

Converbal complex predicates are formally different from the typical SVCs in having an intervening non-finite marker. The characterizations of SVCs and converbs by Bisang (1995) below point to what appears to be a more substantive difference between the two types of complex predicates under discussion.

Verb serialization is the unmarked juxtaposition of two or more verbs or verb phrases (with or without subject and/or object), *each of which would also be able to form a sentence on its own*. (1995: 139; emphasis added)

[Converbs are] verb forms that are specialized for the expression of adverbial subordination, but cannot form a sentence on their own, i.e. *they do not occur as main predicates of independent clauses*. (1995: 141; emphasis added)

Along the similar line, Aikhenvald (2006) tells us that:

Serial constructions are different from complex predicates and other multi-verb sequences which are syntactically combined, but where neither component can function on its own, especially if one of them is a dependent or a nominalized form...Along similar lines, converb constructions...are not serial verb constructions. (2006: 5)

Others also point out the lack of lexical autonomy of converbs and other non-finite forms as a way of distinguishing them from SVCs. In the words of Brill (2004: 3), “[l]exical autonomy is a prerequisite for serialization, excluding non-autonomous coverbs and nonfinite forms, as well as co-lexicalized compounds”.

Converbs indeed do not function as predicates of independent sentences indicating that converbal endings mark non-finiteness or dependency of the relevant verb forms. Thus, from (9a) above, we obtain only one well-formed sentence. A similar pattern is seen in converb expressions in Korean and other languages.

(10) Japanese

- a. *Tagoo=ga* *it-ta.*
 Taro=NOM go-PST
 ‘Taro went.’

- b. **Taroo=ga* *tegami=o* *kai-te.*
 Taro=NOM letter=ACC write-CON
 (lit) ‘Taro having written a letter’

According to Bisang (1995) and others quoted above, this is in sharp contrast to the verbs involved in SVCs, each of which is said to function as a predicate of independent sentences. Take the Mandarin example in (6a). The serialized verbs in this example do appear to individually function as a predicate of independent sentences, as shown below:

(11) Mandarin Chinese

- a. *tā* *zǒu* *le*
 he walk ASP
 ‘He has walked.’
- b. *tā* *qù* *le*
 he go ASP
 ‘He is gone.’

Our point in this paper is that the contrast seen above between converbs and serialized verbs is only apparent. In particular, we argue that only one of the serialized verbs can function as an independent predicate and that the other verbs in the series do not have the lexical autonomy of an independent verb. To see this point, take the two verbs in Asante SVC (5a) above. While the first verb can form a sentence, the second by itself cannot in the way the first verb can since it lacks a pronominal clitic.

(12) Asante

- a. *ɔfa-a* *huma=no*
 3SG-take-PST book=DEF
 ‘He picked up the book.’
- b. **bar-a* *ha*
 come-PST here
 ‘(He) came here.’

Indeed, lack of a pronominal clitic on the second verb is one of the language specific defining properties of SVCs in many languages, as noted for the Formosan Atayal language above (see (4b)). Compare Asante SVC (5a) with the coordinate structure of the language, in which the second verb

requires a pronominal clitic. In contrast to the verbs in SVCs, each verb in this type of structure can function as an independent predicate.

(13) Asante

ɔ-fa-a *huma=no, ná ɔ-bra-a* *ha*
 3SG-take-PST book=DEF and 3SG-come-PST here
 ‘He picked up the book, and he came here.’

Thus, despite the fact that serialized verbs may show certain formal finiteness features such as focus marking in Formosan languages and a tense marker as in Asante SVCs, there is in fact only one verb that functions as a finite verb; the other verbs are functionally non-finite, and as such they cannot function as independent predicates outside the SVC context. One may say that an Asante verb like *bra-a* ‘come-PST’ does function as a predicate if it is morphologically adjusted to include a pronominal clitic. Such morphological adjustment, however, is nothing but conversion of a non-finite form into a fully finite verb form. Converbs too can function as independent predicates once a morphological adjustment such as tense marking has been applied to them; e.g., by changing the converbal *-te* ending to the past *-ta* ending in (10a). This possibility distinguishes serial verbs and converbs, both of which can be turned into a fully inflected form, from so-called coverbs, seen, for example, in the languages of northern Australia, which cannot be made into an inflected form, and accordingly their independent occurrence is limited (see McGregor (2002: 105) for the contexts in which these forms, referred to as U(ninflecting) V(erb) by him, occur independently). Similar forms are called “verb adjuncts” (e.g., [*dad ms amun-a-k*] ‘carrying outside go-3S-PST’) in Pawley’s (in press) study of the Papuan language Kalam, which he characterizes as occurring “only, or primarily as the partner of one or a very few verb roots to form a complex predicate.” Before turning to the issue of the functional non-finiteness of serialized verbs, let us note that many languages allow verb roots to be serialized, as in the following examples:

(14) Budai Rukai (Formosan; Huang 1997)

madalan-aku *alupu*
 like.ACT-1SG.NOM hunt
 ‘I like hunting.’

- (15) Kalam (Papuan; Lane 2007: 54)
Bin pataj ogok amyg pak dad
 woman young these go dig hit carrying
ap-elgp-al...
 come-PST.HAB-3PL
 'Young women used to go and dig and hit and bring back (these animals)...'
- (16) Paameese (Oceanic; Crowley 2002: 43)
Inau nau-vaa tooni atute navule
 1SG 1SG:REAL-go miss place Navul
 'I went past (the village of) Navul.'

These root verbs seen above certainly do not function as independent verbs in other contexts. Bisang (1995) may distinguish them (as root serialization) from others in which serialized verbs show finiteness features, but we shall argue below that serialized verbs with certain finiteness features are also functionally non-finite as the root verbs above are.

3. Non-autonomous nature of serialized verbs

Serialized verbs may show formal finiteness features such as tense marking and verb agreement, but these verbs in the series, except one, are not fully autonomous in the sense that they are neither formally nor functionally finite.⁴ In the first place there are formal restrictions on serialized verbs such that usually only one verb in the series has the potential of displaying the full range of formal finiteness features. We noted in the introduction that SVCs in Formosan languages, whether they have a linker or not, place severe syntactic restrictions on the second and other verbs following the initial one. In contrast to autonomous verbs, these serialized verbs cannot choose focus marking freely, and they cannot host a pronominal clitic. They can be neither negated, nor can they be marked for mood. We have also noted that in Asante SVCs the second verb cannot host a pronominal clitic. Although the second verb in Asante SVCs is marked for tense, it is dependent on the tense of the first verb such that tense marking throughout serial verbs shows concord. Thus, while (17a) below is grammatical, (17b), where a past tense form is combined with a future tense form, is not.

(17) Asante (Morrison 2007: 14)

- a. *Yaw fa-a ɛduane=no ma-a ne jire.*
 Yaw pick.up-PST food=the give-PST his wife
 ‘Yaw picked up the food and gave it to his wife.’
- b. **Yaw fa-a ɛduane=no bɛ́-má ne jire okyina.*
 Yaw pick.up-PST food=the FUT-give his wife tomorrow
 ‘Yaw picked up the food and will give it to his wife tomorrow.’

Asante also exhibits negative concord such that if the first verb is negated, the following verbs in the series must also be negated, as in the following example:

(18) Asante (Morrison 2007: 15)

- Bɛna=no n-nanti n-nanti n-hwɛhwɛ ɛdwiane.*
 man=DET NEG-walk NEG-walk NEG-find food
 ‘The man doesn’t walk for a long time to find food.’

Similar observations on the dependency of serialized verbs have been made elsewhere. For example, Crowley (2002) notes a number of restrictions on serialized verbs in Paamese, which also has SVCs in which the second verb displays a number of formal finiteness features, as in the following example:

(19) Paamese (Crowley 2002: 55)

- Inau ni-uasi vuasi hee-mate.*
 1SG 1SG:DIST.FUT-hit pig 3SG:DIS.FUT-die
 ‘I will hit the pig to death.’

First, the second verb under serialization cannot have its own subject, according to Crowley. If it did, the sentence would be interpreted as a non-serial coordinate construction, as below:

(20) Paamese (Crowley 2002: 55)

- Inau ni-uasi vuasi (kaa) kai hee-mate.*
 1SG 1SG:DIS.FUT-hit pig and 3SG 3SG:DIS.FUT-die
 ‘I will hit the dog and it will die.’

Crowley (2002) also points out that other formal finiteness properties such as clitics and mood marking are severely restricted in their distribution in serial verbs. In his own words:

In the case of serial verb constructions, there is no independent choice of clitics for the two verbs in a serial construction. (2002: 56)

In the case of serial verb constructions, there is a close dependence between the mood and polarity categories that are marked on the first verbs in the series, and the categories which are marked on the second verb. (2002: 57)

Bisang (1995: 144) points out the high degree of indeterminateness or “coolness” of the verb “with regard to Tense-aspect-mood, and the techniques of the dimension of PARTICIPATION” in isolating languages such as Chinese and Thai. Isolating languages typically lack verb morphology for these grammatical categories, and it is indeed difficult to distinguish between finite and non-finite verbs. But the above observations on inflectional languages also show that formal finiteness marking can be deceptive in that even those that mark verbs for certain categories may not be fully autonomous and may be dependent upon another verb with regard to the finiteness features. Even in isolating languages it is a matter of discovering properties distinguishing between finite and non-finite verbs. Matthews (2006), for example, notes that in Cantonese serialization, only the second verb takes the experiential morpheme *gwo*³. If this morpheme is attached to the first verb, a serial interpretation does not obtain. With the assumption that all independent (finite) verbs in the language take this experiential morpheme, we can consider the verb *joek*⁶ ‘to have a date’ in (21a) to be non-finite with regard to this property.

(21) Cantonese (Mathews 2006: 73)

- a. *ngo*⁵ *joek*⁶ *keoi*⁵ *tai*¹-*gwo*³ *lil* *tou*³ *hei*⁶
 I date 3SG watch-EXP this CLF show
 ‘I’ve seen this movie with her (on a date).’
- b. *ngo*⁵ *joek*⁶-*gwo*³ *keoi*⁵ *tai*² *lil* *tou*³ *hei*⁶
 I date-EXP 3SG watch this CLF show
 ‘I’ve arranged with her to see this movie.’

To the extent that converbs by definition never display finiteness features, they are different from some of these serialized verbs that may show certain finiteness features. But I consider such difference to be trivial (see below on a related issue). There is more substantive similarity between converbs and serialized dependent verbs. Namely, neither of them is functionally finite – i.e., neither converbs nor serialized dependent verbs make a separate predication. The illocutionary act of asserting, questioning, ordering, etc. constitutes the major function of predication, which may be

modulated by certain verbal categories, such as modality and evidentiality, contributing to the finiteness. Non-finite verbs such as converbs suspend the predication function of a verb. Our point is that serialized verbs do not individually perform the predication function either (and as such they cannot occur as independent verbs in their own right). That is, in both converbal complex predicates and serial verbs, the relevant verbs jointly make a single predication. It is through the finite verb that a predication is performed, and the formal finiteness features help ground a proposition in a specific speech context so that a proposition can be given a truth value and the speaker can be held accountable for his speech act.⁵ Tense marking, for example, situates the content of a proposition with regard to the time of the speech event. Serialized verbs, even if they may display certain finiteness features, do not perform these functions individually, just as non-finite converbs do not. Careful reading of some of the current definitions of serial verbs reveals an internal logical contradiction. Take the following quotes from Brill (2004) and Aikhenvald (2006):

1) Verbs and Verb phrases (or predicates or nuclei) constitute one single predication referring to aspects of a single event;

7) Lexical autonomy is a prerequisite for serialization, excluding non-autonomous coverbs and nonfinite forms, as well as co-lexicalized compounds. (Brill 2004: 2-3; numbering hers)

[SVCs] are monoclausal...and they have just one tense, aspect, and polarity value.

Each component of an SVC must be able to occur on its own right.⁶ (Aikhenvald 2006: 1)

If serial verbs constitute one single predication, as in Brill's characterization, the individual verbs shouldn't be able to function autonomously because they do not make predication separately. If SVCs, as Aikhenvald says, have just one tense, aspect, and polarity value, which is correct, then some verbs in the series cannot occur in their own right, for they lack specifications for tense and other categories or their specifications are dependent on another verb, as we saw in Asante and Paamese above.

The characterization of serial verbs in terms of their ability to individually function as independent predicates is based on two kinds of observation; 1) serial verbs may display certain formal finiteness features and 2) they, accordingly, show superficial resemblance to independent finite verbs. We have shown above that serial verbs are typically dependent on one of the verbs in the series in their formal properties relating to catego-

ries such as focus (in Austronesian focusing languages), person, tense, mood, and polarity. As such they are unable to occur in an independent context where there is no determining finite verb. This is exactly the same as the situation with converbs, which must occur in construction with a determining finite verb. Indeed, such dependency of serial verbs and converbs is prerequisite for the single joint predication that they make together with a finite verb, the central characteristic shared by serial verbs and converbal complex predicates.

A “single joint predication” by the relevant complex predicates is a functional correlate of the observation that serial verbs “together act like a single verb” (Durie 1997: 290; see also Aikhenvald 2006: 1). Thus, the formal study of complex predicates must explicate what it means to say that “serial verbs act together like a single verb”. This task, however, has proven very challenging because of the wide variety of formal properties that SVCs exhibit across languages and because of the lack of a comprehensive theory of argument structures for complex predicates. In the balance of this paper, we shall outline the relevant issues that must be addressed in dealing with the formal aspects of complex predicates in general and serial verbs (including converbal complex predicates) in particular.⁷

4. The wordhood of complex predicates

In dealing with complex predicates or in ascertaining what is meant by “serial verbs acting together like a single verb”, we must distinguish at least three senses of the technical term “word”. Complex predicates vary considerably in terms of phonological wordhood. Some form a unit of phonological word, as in the case of *Alamblak* cited in footnote 4, while others, like the Paamese root or nuclear serialization exemplified earlier in (16), where verbs may occur successively without an intervening NP, do not form a phonological word. In fact, Crowley (2002: 60) uses this as a criterion for distinguishing serial verbs from verb compounds; in the former each verb maintains phonological autonomy, while in the latter component verbs are subject to a variety of phonological adjustment such as vowel reduction so the whole unit would conform to the phonological pattern of a single word.

In converb languages simple juxtaposition of a converb with a finite verb does not tell us whether the combination is a complex predicate or a reduced form of clausal or VP coordination. For example, the Japanese

form in (22a) below can be analyzed in two ways depending on how the form is pronounced.

(22) Japanese

- | | | |
|----|--|---------------|
| a. | <i>kat-te</i> | <i>yat-ta</i> |
| | buy-CON | give-PST |
| b. | <i>kat-te</i> | <i>yat-ta</i> |
| | H L | L H |
| | '(I) bought (something) and gave (it to someone).' | |
| c. | <i>kat-te</i> | <i>yat-ta</i> |
| | L H | H H |
| | '(I) bought (someone something).' | |

(22b), in addition to a slight pause between the two verbs, has a pitch contour of two phonological words with each verb having a pitch contour H(igh)-L(ow) or L-H of a single (phonological) word. In (22c) the entire phrase has a pitch contour of a single word with a single series of high pitched moras, indicating that Japanese converbial complex predicates form a unit of phonological word. In Japanese the criterion of phonological wordhood, accordingly, does not distinguish converbial complex predicates from verb compounds, which also form a phonological word.

Japanese complex predicates, however, are different from verb compounds in terms of the notion of morphological wordhood. Morphological words exhibit the property of lexical integrity such that internal parts of a word are not susceptible to morphological and syntactic processes – e.g., they do not inflect, cannot be modified, and do not form referential relations with an external element. Morphological integrity obtains in typical compounds of both nominal and verbal type. But this is not the case with many serial verbs, where each verb may inflect, despite the fact that inflectional possibilities are constrained to a greater or lesser extent. Japanese converbial complex predicates are not morphological words either. They allow the second verb to interact with such morphological processes as honorific conversion and suppletion, which cannot affect the second member of a verb compound. Observe the contrast below, where compound verbs do not allow their parts to be morphologically altered, whereas converbial complex predicates show no morphological integrity:⁸

(23) Japanese verb compounds

- a. *hon=o moti-kae-ru* →
 book=ACC carry-return-PRS
 **hon=o moti-o-kaeri-ni naru*
 book=ACC carry-HON-return-ADV become
 ‘bring back a book’
- b. *kako=o kaeri-mi-ru* →
 past=ACC return-look-PRS
 **kako=o kaeri-goran-ni naru*
 past=ACC return-look.HON-ADV become
 ‘look back the past’

(24) Japanese converbal complex predicates

- a. *hon=o mot-te kae-ru* →
 book=ACC carry-CON come-PRS
hon=o mot-te o-kaeri-ni naru
 book=ACC carry-CON HON-return-ADV become
 ‘bring back a book’
- b. *kako=o hurikaet-te mi-ru* →
 past=ACC turn.back-CON look-PRS
kako=o hurikaet-te goran-ni naru
 past=ACC turn.back-CON look.HON-ADV become
 ‘try reflecting upon the past’

Japanese converbal complex predicates are, thus, phonological but not morphological words, whereas verb compounds are words in both phonological and morphological senses.

The most challenging task in dealing with serial verbs is explicating their nature as syntactic words. The general consensus that serial verbs act together as a single verb – despite their variability in the dimensions of phonological and possibly morphological wordhood – alludes to their syntactic wordhood. In the following I shall focus on two related issues concerning the syntactic wordhood of serial verbs. The first issue has to do with the questions of whether SVCs are monoclausal and whether they express a single event – kin notions with the idea that serial verbs act together as a single verb. The general consensus in the field here is that SVCs are monoclausal and that they express a single event, as obvious from some of the characterizations of SVCs quoted earlier.⁹ The second,

more difficult problem has to do with the nature of argument structures associated with serial verbs.

We have already shown that Japanese converbal complex predicate constructions are monoclausal (see (9)). While the syntactic monoclausality and the conceptualization of the multifaceted event as a single event are generally thought to go hand in hand in SVCs (see Aikhanvald's characterization of SVCs in the introduction), there are actually situations where these two do not coincide. The case in point involves causative expressions. In serializing languages causative situations may be expressed in the form similar to serial verbs. Compare the following Asante forms:

(25) Asante

- a. *m-mɛna=no* *piã* *m-mofra=no* *tɔ* *fɛm*
 PL-men=DET push PL-child=DET fall ground
 'The men push the children down.'
- b. *m-mɛna=no* *ma* *m-mofra=no* *di* *nkɥain*
 PL-man=DET CAUS PL-child=DET eat soup
 'The men make the children eat soup.'

(25a) is a cause-effect serial verb construction, while (25b) is a periphrastic causative. Asante periphrastic causatives show the major hallmarks of monoclausality sharing with SVCs of the language such properties as tense-aspect-mood and polarity concord (Yoon 2007). Now, Morrison (2007) shows that while there is a strong tendency for the cause-effect SVC in (25a) to be understood as expressing a unitary event, the causatives such as (25b) clearly express distinct sub-events. In (26a) below it is likely to be understood that the women also push the children down, while (26b) allows two different readings – either the women also make the children eat the soup, or they eat the soup, where the caused event is isolated.

(26) Asante (Morrison 2007: 12)

- a. *m-mɛna=no* *piã* *m-mofra=no* *tɔ* *fɛm*
 PL-men=DET push PL-child=DET fall ground
ná *m-maa=no* *nso* *yɛ* *saa* *ara*
 and PL-woman=DET also do the same
 'The men push the children down and the women also do the same thing.'
- b. *m-mɛna=no* *ma* *m-mofra=no* *di* *nkɥain*
 PL-man=DET CAUS PL-child=DET eat soup

ná m-maa=no nso yε saa ara
 and PL-woman=DET also do the same
 ‘The men make the children eat soup and the women also
 do the same thing.’

Yoon (2007) also shows that the scope of adverbial modification is different between SVCs and causatives such that in the former the entire event comes under the scope of an adverb – e.g., both pushing the children and their falling down take place at the same time, say 3 pm –, but in the latter the caused event can be isolated and be put under the adverbial scope independently from the causing event – e.g., only the children’s eating soup takes place at 3 pm, with the understanding that the causation act takes place prior to this time.

Whether or not SVC-looking causatives are SVCs is controversial (see Durie 1997: 333), but if the expression of a unitary single event is a defining criterion of SVCs (see footnote 9), causatives expressing indirect causation of the type seen above are certainly not SVCs despite their superficial formal resemblance to true SVCs and despite their sharing some crucial syntactic properties characterizing monoclausality.¹⁰

5. The argument structure of complex predicates

As noted above, the issues surrounding the nature of argument structures of serial verbs are most challenging in the treatment of serial verbs. In the remainder of this paper, we can only hope to simply identify one outstanding problem in this area that awaits a systematic treatment. This problem has to do with the central feature of SVCs, namely the property of argument sharing and its syntactic consequences. In (25a) above, for example, the argument *m-mofra=no* ‘the children’ is the patient with regard to both *piã* ‘push’ and *tɔ* ‘fall’. Argument sharing results from the integration of separate sub-events into a unitary macro event at a conceptual level. Durie (1997) offers some preliminary attempt to formally represent this conceptual unification after critically examining Baker’s (1989) syntax-based approach to the problem. Rather than offering my own critical reviews of these approaches, I shall content myself by presenting some data that seem to demand a systematic solution in whatever approach one takes in dealing with the problems of argument structures of serial verbs.

First, a couple of semantically-based phenomena indicative of unified argument structures of SVCs are observed in Japanese. One has to do with the difference in the implied meaning between a converbal complex predicate form and its clausal subordination counterpart, as observed in pairs such as the following:

(27) Japanese

- a. *Hanako=wa kodomo=o toire=ni ture-te it-ta.*
 Hanako=TOP child=ACC toilet=DAT take-CON go-PST
 ‘Hanako took the child to the toilet.’
- b. *Hanako=wa, kodomo=o ture-te, toire=ni it-ta.*
 Hanako=TOP child=ACC take-CON toilet=DAT go-PST
 ‘Hanako went to the toilet taking the child along.’

The difference in meaning between these two sentences is that (27a) implies that the child had to go to the toilet to relieve himself, whereas (27b) implies that Hanako had to go to the toilet to relieve herself. If we assume that only the arguments of a verb can be associated with the conventional meaning of the verb (phrase), the above phenomenon suggests that *kodomo* ‘child’ in (27a) is an argument of the verbal complex of *ture-te iku* ‘take-CON go’ rather than simply being an argument of the converb *ture-te* ‘take-CON’, for it is in relation to the verb phrase *toire=ni iku* ‘go to the toilet’ that the conventional meaning of relieving oneself is engendered. Indeed, this conventional meaning is not associated with *kodomo* ‘child’ in (27b), where it is solely an argument of the converb *ture-te* ‘take-CON’. The relevant meaning contrast is also seen in the accompanying English translations, and it underscores Durie’s (1997: 291) point that “a serial verb complex can often be best translated into a non-serializing language using a single, mono-verbal clause”.

The other phenomenon has to do with benefactive constructions. As shown in Shibatani (1996), benefactive constructions in general convey the intention of transfer of a concrete object to a beneficiary, as in (28a). However, some languages permit constructions with a metonymic interpretation of the type shown in (28b) and (28c), where it is not actually a book or a door that gets transferred – rather it is the content of a book in the case of (28b) and opening space in (28c) that come under the possessive control of the beneficiary.

(28) Japanese

- a. *Taroo=wa Hanako=ni hon=o kat-te yat-ta.*
 Taro=TOP Hanako=DAT book=ACC buy-CON GIVE-PST
 ‘Taro bought Hanako a book.’
- b. *Taroo=wa Hanako=ni hon=o yon-de yat-ta.*
 Taro=TOP Hanako=DAT book=ACC read-CON GIVE-PST
 ‘Taro read Hanako a book.’
- c. *Taroo=wa Hanako=ni to=o ake-te yat-ta.*
 Taro=TOP Hanako=DAT door=ACC open-CON GIVE-PST
 ‘Taro opened the door for Hanako.’

Now, the object argument of the individual verbs in (28b) and (28c) are not associated with the metonymic interpretation in the non-serial context. Neither *hon=o yomu* ‘read a book’ nor *hon=o yaru* ‘give a book’, for example, yields a metonymic sense that the content of a book was the object of the action of reading or giving. The metonymic transfer sense of (28b), for example, obtains only when the goal (to be construed as a beneficiary) and the patient/theme argument are linked to the complex predicate <*yon-de yaru*> ‘read-CON GIVE’ in the form of the unified argument structure <Agent (*Taroo*), Goal (*Hanako*), Patient/Theme (*hon*)>.

A clear piece of syntactic evidence that serial verbs form a unified argument structure is seen in the focus marking pattern in the Formosan language Atayal.

(29) Wulai Atayal

- a. *m-wah=ku m-ita? yaya?=su?*
 AF-come=1SG.NOM AF-see mother=2SG.GEN
 ‘I come to see your mother.’
- b. *wah-un=mu m-ita? yaya?=su?*
 come-PTF=1SG.GEN AF-see mother=2SG.GEN
 ‘I will come to see your mother.’
- c. **m-wah=ku? yaya?=su?*
 AF-come=1SG.NOM mother=2SG.GEN
 ‘I will come to your mother.’
- d. **wah-un=mu yaya?=su?*
 come-PTF=1SG.GEN mother=2SG.GEN
 ‘I will come to your mother.’

As discussed earlier, in Formosan SVCs the focus marking of the second verb is limited such that either it is default AF (actor focus) or it harmonizes with the first verb. In Wulai Atayal, the focus marking on the second verb is default AF. The interesting point of the above data is that in (29b) the first verb *wah* ‘come’ focuses on the patient *yayaʔ=suʔ* ‘your mother’ of the second verb. The verb *wah* ‘come’ in isolation does not take a human as a goal, let alone the possibility of focusing it with PTF marking – see the ungrammatical forms in (29c,d). The pattern above, thus, indicates that *yayaʔ=suʔ* ‘your mother’ in (29a,b) is functioning as a patient of the verbal complex <*wah itaʔ*> ‘come see’ and that it triggers PTF marking in the first verb.

The benefactive constructions seen above, however, present some interesting problems for the view of the unified argument structure of SVCs. The verb *yaru* ‘GIVE’ in the Japanese benefactive construction functions exactly like benefactive applicatives in other languages that increase verb valency by one. The syntax of benefactive constructions of this type parallels the syntax of the basic “give” construction of the language, as shown in Shibatani (1996).¹¹ Compare the following patterns, where if the language has the direct object-indirect object pattern in the basic “give” construction, the benefactive construction follows the same pattern, as in Japanese, whereas if the language has the double object pattern in the basic “give” construction, the benefactive applicative construction also exhibits the double object pattern, as in Balinese.

(30) Japanese (DO-IO pattern)

- a. Basic “give” construction
Taroo=ga Hanako=ni hon=o yat-ta.
 Taro=NOM Hanako=DAT book=ACC give-PST
 ‘Taro gave Hanako a book.’
- b. Benefactive construction
Taroo=ga Hanako=ni hon=o kat-te yat-ta.
 Taro=NOM Hanako-DAT book=ACC buy-CON give-PST
 ‘Taro bought Hanako a book.’

(31) Balinese¹² (Double object pattern)

- a. Basic “give” construction
Tiang nge-maang anak=e cenik buku.
 I AF-give child=DEF male book
 ‘I gave the boy a book.’

- b. Benefactive applicative¹³
Tiang meli-ang anak=e cenik buku.
 I buy-APPL child=DEF male book
 ‘I bought the boy a book.’

The syntax of the Balinese suffixal benefactive applicative construction parallels the basic “give” construction in other respects. For example, either the first or the second object of these constructions can be patient-focused and be made a topic, as shown below:

(32) Patient-focus constructions for (31a)

- a. *Anak=e cenik baang tiang buku.*
 child=DEF male PTF.give I book
 ‘I gave the boy a book.’
- b. *Buku=ne baang tiang anak cenik.*
 book=DEF PTF.give I child male
 ‘I gave the book to a boy.’

(33) Patient-focus constructions for (31b)

- a. *Anak=e cenik beli-ang tiang buku.*
 child=DEF male PTF.buy-APPL I book
 ‘I bought the boy a book.’
- b. *Buku=ne beli-ang tiang anak=e cenik.*
 book-DEF PTF.buy-APPL I child-DEF male
 ‘I bought the book for the boy.’

Now, interestingly Balinese in addition has a benefactive SVC of the following form:

(34) Balinese benefactive SVC

- a. *Tiang meli buku=ne baang anak=e cenik.*
 I AF.buy book=DEF GIVE child=DEF male
 ‘I bought the book for the boy.’
- b. *Buku=ne beli tiang baang anak=e cenik.*
 book=DEF PTF.buy I GIVE child=DEF male
 ‘I bought the the book for the boy.’
- c. **Anak=e beli tiang buku=ne baang.*
 child=DEF PTF.buy I book=DEF GIVE
 ‘I bought the boy the book.’

Here the syntax differs markedly from that of the basic “give” construction or that of the benefactive applicative construction in such a way that the second object – the object of the second verb – cannot be focused and made the topic of the whole sentence.¹⁴ Compare this with the pattern exhibited by the Central Malayo-Polynesian language Sikka of Flores Island, which has the following two possibilities – (35a)-(36a) – with the benefactive SVC construction:

(35) Sikka benefactive SVC

- a. *Nimu boter payung beli ina nimun.*
 he buy umbrella GIVE mother his
 ‘He bought an umbrella for his mother.’
- b. **Ina nimun nimu boter payung beli.*
 mother his he buy umbrella GIVE
 ‘He bought his mother an umbrella.’

(36) Sikka benefactive SVC

- a. *Nimu boter beli ina nimun payung.*
 he buy GIVE mother his umbrella
 ‘He bought his mother an umbrella.’
- b. *Ina nimun nimu boter beli payung.*
 mother his he buy GIVE umbrella
 ‘He bought his mother an umbrella.’

The pattern in (36a) is not available in Balinese, a Western Malayo-Polynesian language, in which benefactive and other applicative SVCs appear less well-developed than in their Central Malayo-Polynesian sisters. Now, the Sikka PTF (patient-focus) construction simply moves a theme/patient nominal to sentence initial position. It turns out that while the goal/beneficiary of *beli* ‘GIVE’ of (35a) cannot be patient-focused, that in (36a) can, indicating that in the latter the *boter beli* ‘buy GIVE’ sequence form a unified argument structure in which the agent, theme/patient and goal/beneficiary nominals function as its arguments.

It thus appears that in the benefactive SVC of the form “buy X GIVE Y”, the argument structures of the individual verb are not fused at least in the syntax, in contrast to the SVC of the form “buy GIVE Y X” as seen in Japanese – see (30b) – and in one of the benefactive SVC patterns in Sikka shown in (36a), where the two verbs occur contiguously. Whether the contiguous verb pattern obtains or not seems to depend, at least to some extent,

on the OV/VO distinction, with the former favoring the contiguous verb pattern.¹⁵ Additional examples showing the contrasting pattern are given below for benefactive and instrumental SVCs.¹⁶

- (37) Y X V₁ V₂pattern/X Y V₁V₂ pattern
- a. Alamlak (Durie 1997: 307 from Bruce 1988)
na yawyt yimam wikna-hay-më-an-m
 I dog people buy-give-REMOTE.PST-1SG-3PL
 'I bought a dog for the people.'
- b. Imonda (Durie 1997: 307 from Seiler 1986)
sa ka-m pɔ-ai-h-u
 coconut I-OBJ pick-give-REC-IMP
 'Pick the coconut and give it to me.'
- c. Barai (Durie 1997: 306 from Foley and Olsen 1985)
fu burede ije sime abe ufu
 he bread DEF knife take cut
 'He cut the bread with the knife.'
- (38) V₁ X V₂ Y pattern
- a. Asante (Morrison 2007)
Ye-bɔ-tɔ bi a-ma mo
 1PL-FUT-buy some CONS-give 2PL
 'I will buy you some.'
- b. Mandarin Chinese (Shibatani et al. 1994: 464)
wǒ zuò fàn gěi háizi
 I cook rice GIVE child
 'I cooked the child rice.'
- c. White Hmong (Durie 1997: 345 from Jarkey 1991)
mws muab riam txiav nqiaj qaib
 3SG take knife cut meat chicken
 'She cut some chicken with a knife.'

Assuming that the first pattern above has the flat ditransitive syntax of the Japanese benefactive SVC in (30b) and the second pattern the complex double VP syntax of the Sikka benefactive SVC pattern in (35a), the question remains as to how this distinction follows from the unified argument structure if such unification takes place in both types of construction. Durie (1997: 374), adopting Jackendoff's (1990) theory of lexical conceptual structures, offers the following fused conceptual structure for the instrumental SVC of the type exemplified by the White Hmong example in (38c).

$$(39) \left[\begin{array}{l} \text{AFF}^- ([\text{SHE}]_A, [\text{CHICKEN}]_A) \\ \text{CS}^+ ([\text{SHE}], [\text{INCH} ([\text{BE.CUT} ([\text{CHICKEN}]_A)])]) \\ \text{BY} \left[\begin{array}{l} \text{CS}^+ ([\text{SHE}], [\text{AFF}^- ([\text{KNIFE}], [\text{CHICKEN}]_A)]) \\ \text{AFF}^- (\text{SHE})_A, [\text{KNIFE}]_A \end{array} \right] \end{array} \right]$$

Durie (1997: 348) tells us that “in accounting for serial structures like [(38c)] it is possible to calculate θ -roles and a θ -hierarchy at two levels: at one level to determine the separate objects of individual verbs, and again at the level of the fused argument structure”. That is, KNIFE in the above conceptual structure is the patient of *muab* ‘take’ at the level of individual verbs, but it is construed as the instrumental of the overall fused argument structure. While this is an attractive analysis capturing an intuition behind a structure like (38c), the question is how the arguments of the fused argument structure are realized and how their syntactic behavior can be accounted for. That is, it remains to be explicated as to how the two benefactive SVC patterns in Sikka in (35)-(36), for example, are accounted for in terms of the representation like (39). The conceptual unification of the arguments in (35a) does not seem to automatically lead to a fused argument structure in syntax.

6. Conclusion

Shibatani and Huang (forthcoming) and this paper together constitute a challenge to some very basic current understandings of the nature of SVCs. The former has shown that the alleged property of SVCs listed in (1a) in the introduction, namely that SVCs do not have an intervening linker, dependency marker, or conjunction, excludes SVCs with a linker in some Formosan languages. This paper has strived to demonstrate that serial verbs do not have the lexical autonomy of independent verbs, and as such cannot function out of the serial context, contrary to the point made in (1b). The remaining properties in (1), namely that serial verbs form a single predicate constituting a simplex clause and that they typically share arguments, do not distinguish serial verbs from converbal complex predicates. Indeed, serial verbs are much like converbal complex predicates in that there is dependency between the component verbs and that each verb does not make a separate predication individually. While a number of outstanding problems remain, especially in the area of argument structures and

their realization, or what it precisely means syntactically to say that “serial verbs act like a single verb”, SVCs are not as mysterious as the current definitions appear to make them. Neither do they form a “robust construction type”, *pace* Dixon (2006: 338). The general point of this paper is that, while serialized verbs all show some kind of grammatical dependency among them, SVCs are not a unified phenomenon across languages or even within a single language.

Notes

- * The preparation of this paper was in part supported by the NSF grant BCS-0617198.
1. In his later work (1997: 382), Foley modifies his definition of SVCs slightly and recognizes the possibility of an intervening conjunction, such as the sequential marker *mpi* in Yimas, between serialized verbs. His new definition reads as follows: “Serial verb constructions may be defined as strings of juxtaposed verbs stems, *typically with no overt conjunctions*, which share at least one core argument...” (emphasis added)
 2. In this paper I use the expressions “the first verb” and “the second verb” in reference to the verbs in the series. The former refers to the verb that has the full finiteness features. Such a verb may actually be initial, as in the Atayal examples here, or may be the last one in the verb series, depending on the language. The “second verb”, which may not actually occur second in place, refers to the verb that we claim is restricted in formal properties.
 3. The Asante examples here and below are based on the class notes from the course Linguistics 407/408 “Linguistic Field Methods” at Rice University taught during the 2006-2007 academic year. I am grateful to Alex Aphiah, who helped the class as an Asante consultant. See Morrison (2007) for a fuller account of the Asante SVCs.
 4. In SVCs of the following kind, where serialized verbs form a phonological word, it is not even accurate to talk about one verb being fully finite and the other(s) not: *Tat-noh-më-an-r* (hit-die-REMOTE.PST-1SG-3SM) ‘I killed him’ (Alamblak, Papuan; Durie 1997: 307 from Bruce 1988).
There is an interesting issue that needs to be further pursued here. In this paper we simply assume that the first, or one of the verbs, in the series takes on all the finiteness features and the other verb(s) showing only partial, if any, formal finiteness. It is possible that at the abstract level there is one finiteness functional head that governs all the verbs in a series. How the finiteness features are distributed over the serialized verbs depends on individual languages. In such a treatment, verbs in a series would play the predication function jointly (cf. a discussion below in the text), but none of them would be uniquely

associated with the finiteness and hence would be able to occur independently outside the serialization context.

5. See the recent paper by Anderson (2007) for a related discussion on the notion of predication and the finiteness of a predicate form.
6. Interestingly Durie (1997), one of the most thorough studies of verb serialization, does not ascribe this putative property to serial verbs.
7. See Durie (1997) for detailed and revealing discussions on the relevant issues from both formal and functional angles.
8. Japanese converbal complexes also allow insertion of particles such as *wa* (contrastive topic), *mo* 'even', and *sae* 'even' after the *-te* ending. Constructions with these particles typically form a concessive clause followed by a negative clause. Similarly, Korean benefactive converbal forms such as *yel-e-nun cwu-ess-ta-man* (open-CON-TOP GIVE-PST-IND-though 'though (I) opened the door (for someone)') and *mwun-ul yele-to cwu-ko, tat-a-to cwu-ess-ta* (door-ACC open-CON-also GIVE, close-CON-also GIVE-PST-IND '(I) also opened and also closed the door (for someone)') are possible with the intervening topic particle *nun* and the adverbial particle *to*.
9. Cf. Durie (1997: 291): "a single serial verb complex describes what is conceptualized as a single event: this is repeatedly reported to be a clear intuition of native speakers, and can be demonstrated through semantic analysis. It follows from this that a serial verb complex can often be best translated into a non-serializing language using a single, mono-verbal clause."
10. Yoon (2007: 18) points out a couple of syntactic differences between SVCs and periphrastic causatives in Asante. One of them has to do with the distribution of pronominal clitics. As mentioned earlier, SVCs do not permit a pronominal clitic on the second verb, but in causatives the causee NP may appear in a nominative clitic form; cf.
 - a. *bɛma=no ma-a no di-i nkwain=no*
 man=DET CAUS-PST 3SG.ACC eat-PST soup=DET
 'The man made him eat the soup.'
 - b. *bɛma=no ma-a σ=di-i nkwain=no*
 man=DET CAUS-PST 3SG.NOM=eat-PST soup=DET
 'The man made him eat the soup.'

Whatever the relationship between (a) and (b) above may be, the points that Morrison and Yoon make with regard to Asante causatives obtain with regard to the (a) type of construction, which resembles true SVCs in form. The monoclausality and the single eventhood do not generally go hand in hand in productive morphological causatives, e.g., Japanese *aruka-se* 'walk-CAUS', if they express indirect causation with the causee acting as an agent. They express two distinct events – the causing and the caused event – even though they may show syntactic monoclausality (see Shibatani and Pardeshi 2002).

11. For example, unlike some other ditransitive verbs, which permit passivization centering on either object, the main verb *yaru* 'give' does not permit neither object to become a subject of a passive clause. Neither do *V-te yaru* SVC forms even if the first verb by itself allows passive formation.
12. The Balinese data below have been provided by Ketut Artawa of Udayana University. The Sikka data further below were collected during my fieldwork in Flores Island in eastern Indonesia in the summer of 2008.
13. Foley (1997: 392) argues that the argument structures of SVCs and those involving morphological applicative affixes differ fundamentally. The parallelism between the Japanese benefactive SVCs and the Balinese benefactive applicative constructions casts doubt on this assumption, while it is true that the two types of benefactive in Balinese show sufficiently different syntax to warrant different treatments (but see the Sikka data below).
14. See Li (1991) and Manfredi and Laniran (1988) for this kind of "object asymmetry" between the object of the first verb and that of the second verb in SVCs in other languages.
15. The correlation between the double-object pattern and word order mentioned here is only suggestive. I do not have sufficient data to confirm the correlation.
16. Stewart (2001: 234ff) would not consider these instrumental constructions as SVCs. His discussion, however, centers mostly on those instrumental constructions in which the first verb has been grammaticalized to a considerable extent.

References

- Aikhenvald, Alexandra
 2006 Serial verb constructions in typological perspective. In Alexandra Aikhenvald and R.M.W. Dixon (eds.), 1–68.
- Aikhenvald, Alexandra, and R.M.W. Dixon (eds.)
 2006 *Serial Verb Constructions: Cross-linguistic Typology*. Oxford: Oxford University Press.
- Alsina, Alex, Joan Bresnan, and Peter Sells (eds.)
 1997 *Complex Predicates*. Stanford: CSLI Publications.
- Anderson, John
 2007 Finiteness, mood, and morphosyntax. *Journal of Linguistics*, 43: 1–32.
- Baker, Mark
 1989 Object sharing and projection in serial verb constructions. *Linguistic Inquiry* 20: 513–553.
- Bisang, Walter
 1995 Verb serialization and converbs – differences and similarities. In *Converbs in Cross-linguistic Perspective: Structure and Meaning of Adverbial Verb Forms – Adverbial Particles, Gerunds –*, Martin

- Haspelmath and Ekkehard König (eds.), 137–188. Berlin: Mouton de Gruyter.
- Bril, Isabelle
2004 Complex nuclei in Oceanic languages: Contributing to an areal typology. In *Complex Predicates in Oceanic Languages: Studies in the Dynamics of Binding and Boundness*, Isabelle Bril and Françoise Ozanne-Rivierre (eds.), 1–46. Berlin: Mouton de Gruyter.
- Crowley, Terry
2002 *Serial Verbs in Oceanic: A Descriptive Typology*. Oxford: Oxford University Press.
- Dixon, R.M.W.
2006 Serial verb constructions: conspectus and coda. In Aikhenvald and Dixon (eds.), 338–350.
- Durie, Mark
1997 Grammatical structures in verb serialization. In Alsina, Bresnan, and Sells (eds.), 289–354.
- Foley, William
1997 Polysynthesis and complex verb formation: the case of applicatives in Yimas. In Alsina, Bresnan, and Sells (eds.), 355–395.
- Foley, William and Michael Olsen
1985 Clausehood and verb serialization. In *Grammar Inside and Outside the Clause*, Johanna Nichols and Andrew Woodbury (eds.), 17–60. Cambridge: Cambridge University Press.
- Huang, Lillian
1997 Serial verb constructions in some Formosan languages: a typological view. Paper presented at the Eighth International Conference of Austronesian Linguistics. Taipei.
- Jackendoff, Ray
1990 *Semantic Structures*. Cambridge, MA: MIT Press.
- Lane, Jonathan
2007 *Kalam serial verb constructions*. Canberra: Pacific Linguistics, Australian National University.
- Lehmann, Christian
1989 Towards a typology of clause linkage. In *Clause combining in Grammar and Discourse*, John Haiman and Sandra Thompson (eds.), 181–225. Amsterdam: John Benjamins.
- Li, Yafei
1991 On deriving serial verb constructions. In *Serial Verbs: Grammatical, Comparative, and Cognitive Approaches*, Claire Lefebvre (ed.), 103–136. Amsterdam: John Benjamins.

- Manfredi, Victor and Yetunde Laniran
 1988 Extractions from Yorùba serialization. 2nd Niger-Congo Syntax and Semantics Workshop, MIT Lexicon Project. April 11th, 1988.
- Matthews, Stephen
 2006 On serial verb constructions in Cantonese. In Aikhenvald and Dixon (eds.), 69–87.
- McGregor, Willaim
 2002 *Verb Classification in Australian Languages*. Berlin: Mouton de Gruyter.
- Morrison, Michelle
 2007 Towards a revised definition of the serial verb construction: evidence from the Asante dialect of Akan. Term paper for Linguistics 408 “Linguistic Field Methods”, Rice University.
- Shibatani, Masayoshi
 1996 Applicatives and benefactives: A cognitive account. In *Grammatical Constructions: Their Form and Meaning*, Masayoshi Shibatani and Sandra Thompson (eds.), 157–194. Oxford: Oxford University Press.
 2007 Grammaticalization of converb constructions: The case of Japanese – *te* conjunctive constructions. In *Connectivity in Grammar and Discourse*, Jochen Rehbein and Christiane Hohenstein (eds.), 21–49. Amsterdam: John Benjamins.
- Shibatani, Masayoshi, and Lillian Huang
 forthcoming. Serial verb constructions in Formosan languages: Their form and grammaticalization pattern.
- Shibatani, Masayoshi, and Prashant Pardeshi
 2002 The causative continuum. In *The Grammar of Causation and Interpersonal Manipulation*, Masayoshi Shibatani (ed.), 85–126. Amsterdam: John Benjamins.
- Shibatani, Masayoshi, Zhāng Qín, and Lú Tāo
 1994 Chinese benefactive constructions: Toward a formal analysis of the schema-based cognitive approach. In *In Honor of William S-Y. Wang: Interdisciplinary Studies on Language and Language Change*, Matthew Y. Chen and Ovid J. L. Tzeng (eds.), 459–477. Taipei: Pyramid Press.
- Stewart, Osamuyimen
 2001 *The Serial Verb Construction Parameter*. New York: Garland.
- Yoon, Soyeon
 2007 Causative constructions in Asante. Term paper for Linguistics 408 “Linguistic Field Methods”, Rice University.