Sign language serial verb constructions fit into the bigger picture. Commentary on Bos (1996)

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1 Introduction[1]

In the 20 years that have passed since Heleen Bos' original work on serial verb constructions in Sign Language of the Netherlands (NGT), continuing work on verb serialization has consolidated the topic. A greater breadth and depth of (spoken) language data has made it possible to characterize the phenomenon and to develop a taxonomy of different types of serial verb constructions. Unfortunately, these developments have not been accompanied by a parallel growth in the topic in sign linguistics. Since Supalla's (1986, 1990) seminal work on classifier forms and verbs of motion, sign linguists have been aware of the presence of serial verb constructions in sign languages, but very little has happened since then. The work on classifier constructions in sign languages has acknowledged the existence of serial verb constructions of this type (e.g. Slobin & Hoiting 1994; Hong 2003; Tang 2003), provided formal models of such constructions (Benedicto, Cvejanova & Quer 2008) or even suggested alternative analyses (see Tang & Yang 2006 for the proposal that double verb constructions in Hong Kong Sign Language are verb-verb compounds). However, all the cited works focus on verb constructions that involve classifiers. In contrast, Bos identified serial verb constructions made up of lexical verbs. In this commentary, I intend to point out why that difference is important, and to show what Bos' data can add to what we know about signed languages and about serial verb constructions. In order to do this, I adopt recent typological work on serial verb constructions: Aikhenvald (2006) provides a thorough overview that allows us to situate the NGT structures within the range of serial verb constructions that appear in many different languages of the world (section 2); Haspelmath (2016) proposes a narrower approach aimed at allowing crosslinguistic comparison by means of a stricter definition of serial verb constructions and a set of accompanying generalizations that follow from this definition

[1] The following abbreviations used in this article. Sign language names: AdaSL – Adamarobe Sign Language, ASL – American Sign Language, BSL – British Sign Language, HKSL – Hong Kong Sign Language, LIS – Italian Sign Language, LSE – Spanish Sign Language, NGT – Sign Language of the Netherlands. In the glosses: NEG – negation, CL – classifier, DEF – definite, IX – indexical point, PER – perfect, PL – plural, rs – role shift, SG – singular. Subindices on glosses indicate spatial modification of a sign and nonmanual marking is transcribed above the glosses. Serial verb constructions are underlined in the examples to make them clearer to the reader (following Aikhenvald 2006).

(section 3).

2 Symmetrical and asymmetrical serial verb constructions

A major distinction in serial verb constructions is between symmetrical and asymmetrical (Aikhenvald 2006). In this section I describe the difference based on the spoken language data (2.1) and then turn to how these categories can be applied to the sign language data (2.2).

2.1 Symmetrical and asymmetrical serial verb constructions in spoken languages

Symmetrical constructions consist of verbs from a semantically and grammatically unrestricted class, whereas in asymmetrical constructions one verb (the 'major' verb) comes from an unrestricted class but the other (the 'minor' verb) is from a grammatically restricted class. The two types of construction tend to have quite different properties. In terms of semantics, symmetrical serial verb constructions may depict an action sequence, cause-effect or manner.[2] Examples of each are shown in (1)-(3), respectively: in (1) the construction describes a sequence of actions, expressed by the verbs 'cook' and 'eat'; the combination of a transitive verb 'hit' (the cause) and an intransitive verb 'split open' (the effect) combine to give the transitive meaning of 'shatter' in the construction in (2); and in (3) the manner of an action is described by combining the verb 'crawl' with the verb 'go'. In all cases, the verbs that appear in the symmetrical construction are not from a restricted semantic or grammatical class. (I follow Aikhenvald's convention of underlining the serial verb construction in the language line and in the glosses for clarity. Any original sources are given in Aikenvald 2006.)

(1) Áma â-ɖa nú ɖu
NAME POT-cook thing eat
'Ama will cook and eat' Ewe, Niger-Congo (Ameka 2006: 138)

(2) ó tì-wà-rà étéré a
he hit-split.open-TENSE plate the
'He shattered the plate' Igbo, Niger-Congo (Aikhenvald 2006: 2)

(3) ɖev-í mé-tá yi xɔ-a me o
child-DEF NEG-crawl go room-DEF containing.region.of NEG
'The child didn't crawl into the room' Ewe (Ameka 2006: 138)

Asymmetrical constructions, on the other hand, tend to express different sorts of categories,

[2] This overview is not exhaustive and serial verb constructions fulfill other semantic functions, as appear in Aikhenvald's comprehensive description. I limit myself to those semantic features that will be relevant to the discussion of the sign language data.

such as direction, aspect or valency increasing mechanisms. Directional serial verb constructions are extremely common in most serializing languages, and they feature verbs of motion with orientational semantics as the minor verb, which can combine with another verb to create a new meaning. Thus, in example (4), the verb 'come' is the minor verb and 'take' is the major verb, giving the meaning 'bring'.

(4) lei[5] lo[2] di[1] saam[1] lai[4]
you take PL clothing come
'Bring some clothes' Cantonese (Aikhenvald 2006: 21)

Aspectual meaning is another common function for serial verb constructions, and the minor verb often comes from verbs of motion or posture, or from verbs such as 'hold', 'start', or 'finish'. In example (5), the verb 'finish' serves as the minor verb, together with the major verb 'go', to express the completive aspect.

(5) kora yo ja chegá nalí eli ja kaba bai
when 1SG PER arrive there 3SG PER finish go
'When I arrived there he had gone'
Kristang, Portuguese-based creole (Aikhenvald 2006: 23)

As valency increasing mechanisms, serial verb constructions may make it possible to mark benefactives or instrumentals. The former often involves 'give' as the minor verb, as shown in (6), in which *dá* ('give') combines with the verb 'buy' to introduce the recipient of the direct object 'the book'. Instrumental constructions frequently use the verb 'take', illustrated by the example from the East Timor language Tetun Dili in (7), which includes the instrument 'knife' for the major verb 'cut'.

(6) Kofí bi bía dí búku dá dí muyé
Kofi TENSE buy the book give the woman
'Kofi had bought the woman the book' Saramaccan Creole (Aikhenvald 2006: 26)

(7) abó lori tudik ko'a paun
grandparent take knife cut bread
'Grandfather used the knife to cut the bread.'
Tetun Dili, Austronesian (Aikhenvald 2006: 26)

In addition to these differing semantic functions, symmetrical and asymmetrical serial verb constructions also tend to cluster with respect to other properties, namely, the order of the constituent verbs and grammaticalization.

In terms of the relative order of the verbs, symmetrical constructions generally respect a principle of iconic coherence, such that the verb that represents a prior action appears before the verb that denotes a subsequent action. This ordering is most apparent in the case of cause-

effect constructions, as in (2), in which the verb describing the cause (‘hit’) precedes the verb describing the effect (‘split open’). The effect can also be seen in the case of action sequences: the relative order of the verbs in (1) is conditioned by the intended meaning of ‘cook [first] and [then] eat’. The category of symmetrical verbs that do not follow this iconic ordering are those expressing manner. In this case, the constituent verbs describe (sub-)events that occurs simultaneously, so there is no question of relative order due to considerations of (temporal) iconicity. (The order of the verbs in these constructions may be governed by other, grammatical factors.) In contrast to the tendency of symmetrical constructions to have iconic constituent order, in asymmetrical constructions the order is not necessarily iconic. The minor verb may precede or follow the major verb, and the order may depend on the semantic function of the construction.

From a diachronic point of view, symmetrical and asymmetrical constructions evolve in divergent directions. Symmetrical constructions tend to lexicalize, frequently resulting in idiomatic expressions. This tendency is illustrated by the examples from Igbo in (8).

(8) a. kà-sá
say-spread.open
‘spread information, rumours’

b. cè-fù
think-be.lost
‘forget’

Igbo (Aikhenvald 2006: 34)

Asymmetrical constructions, on the other hand, tend to grammaticalize. The minor verb of an asymmetrical construction may develop into an affixes or particles that mark a wide variety of grammatical functions, including aspect, direction or benefactives. Toqabaqita, an Oceanic language spoken in the Solomon Islands, provides examples of such grammatical markers that can be traced back to verbs that participated as the minor verb in serial verb constructions but have left behind their verbal status in the grammaticalization process: the verb ‘finish’ has grammaticalized into a completive marker; the motion verbs ‘come’ and ‘go’ have grammaticalized into directional particles; the verb ‘give’ has grammaticalized into a preposition that marks beneficiaries (Lichtenberk 2006: 271).

In summary, serial verb constructions can be classified as symmetrical or asymmetrical based on restrictions that apply to one of the constituent verbs. This classification has consequences for the semantic function, the constituent verb order and any subsequent development (i.e. lexicalization or grammaticalization) of the serial verb constructions. While the symmetrical/asymmetrical distinction and the associated properties do not represent an absolute binary division but rather extremes in a continuum, the cross-linguistic data reveal patterns that support the existence of general principles behind the organization of serial verb constructions. Furthermore, this classification provides a useful framework to examine serial verb constructions in sign languages, and the NGT structures described by Bos (1996).

2.2 Symmetrical and asymmetrical serial verb constructions in sign languages

As mentioned in the introduction, much of the work on serial verb constructions in sign language has focused on classifiers and verbs of motion. A typical structure is shown in (9), an

American Sign Language (ASL) example that involves two classifier constructions, one to express manner, the other to express path.

(9) PERSON CL:limp CL:move-in-circle
'A person limping in a circle' ASL (adapted from Supalla 1990: 134)

Given that these forms center on verbs of motion (and the fact that classifiers generally express spatial information), in terms of the taxonomy described in the previous section, this sort of verb serialization appears to be an asymmetrical construction of the directional type, similar to (4) above. However, a verb of motion or path is not necessarily directional and the minor verb in directional asymmetrical constructions normally has orientational semantics of the type 'come' or 'go' (and typically deictic and thus relative to the speaker). This is not the case in (9). Rather than the path verb, it is the manner verb that categorizes this type of construction, making it a symmetrical manner construction, similar to (3) above.[3] This is supported by the fact that classifier constructions of manner can accompany verbs other than verbs of motion, as can be seen in the Spanish Sign Language (LSE) examples in (10): in (a) the lexical verb 'clean' combines with a classifier predicate describing how the action was carried out; in (b) the verb 'fall asleep' is accompanied by a classifier that describes a jolting head nod to express post-prandial fatigue.

(10) a. TABLE DIRTY CLEAN CL:rub object vigorously
'The table was dirty so he rubbed it clean'
b. LUNCH AFTER ALWAYS FALL-ASLEEP CL:head dropping and jerking back up
'After lunch I'm always drowsing off' LSE

These structures are reminiscent of verb sandwiches described by Fischer & Janis (1990) in which a verb (or a related verb) is repeated with aspectual marking, and which have been analyzed as a single clause (Matsuoka 1997). I suspect that the second verb is invariably a handling (10a) or body-part (10b) classifier construction or some form of constructed action (in which the signer literally enacts how the action is performed). This is possibly a result of the way in which sign languages tend to express manner, rather than a restriction on the second verb. Tang (2003) provides examples in Hong Kong Sign Language (HKSL) in which the manner verb is a lexical verb like RUN or MARCH, but also points out that these are 'imit-signs' which reflect the movement of the limbs in the action being described. The examples of verb sandwiches in the literature also involve enacting verbs such as TYPE, HUG, LAY-BRICK or WASH (Johnston, Vermeerbergen, Schembri & Leeson 2007).

A different type of serial verb construction involving classifiers that has been described in the literature is the cause-effect construction of the symmetrical type, similar to (2) above.

[3] An alternative line of argumentation is to exploit Supalla's (1990) claim that the path verb in fact expresses another type of manner, namely manner of motion along a path (in contrast to manner of locomotion, expressed by the other verb). This also pushes the classification towards a manner construction rather than a directional construction.

An example from HKSL is given in (11), in which the transitive verb ‘punch’ combines with the intransitive verb ‘shatter’ to produce the transitive verb ‘shatter’. Notice that the order of the verbs follows the temporal iconicity described in the previous section of cause (‘punch’) then effect (‘shatter’). Additionally, the second verb is intransitive, which Aikhenvald (2006: 15) notes is nearly universal for this type of construction. (We will return to this point in section 3 below when we examine Haspelmath’s cross-linguistic generalizations for serial verb constructions.)

(11) GLASS CL:object at x FATHER CL:punch x CL:object at x shatters
‘Father shatters a glass panel by punching it’
HKSL (adapted from Tang & Yang 2006: 1249)

Another possible candidate for cause-effect constructions are the double-verb constructions in which the verb is repeated from two different perspectives using spatial agreement and role shift, first described by Supalla (1986). The British Sign Language (BSL) example in (12) shows how the verb HIT appears first from the perspective of the agent (the girl) and then from the point of view of the patient (the boy).

(12) GIRL BOY-PERSON-AT-X CL:punch object at x (rs:girl) CL:punched on chin (rs:boy)
‘The girl punched the boy in the face’ rs=role shift
BSL (adapted from Morgan & Woll 2003: 304)

In order to qualify as a serial verb construction, this double verb construction must be monoclausal (rather than two separate clauses). The presence of agreement inflection and role marking (and the concomitant non-manual markers) on each of the verbs suggest that a monoclausal analysis would be a challenge, although such proposals have been made (Bellugi, van Hoek, Lillo-Martin & O’Grady 1989).

So far, we have seen that the classifier based serial constructions in sign languages can be categorized as symmetrical. They display the semantic functions associated with this type of construction, namely, manner and cause-effect, and that, in the case of cause-effect constructions, they follow the iconic ordering of cause and then effect, as occurs in spoken languages. As far as the third property of serial verbs constructions goes, do these classifier based constructions tend to lexicalize rather than grammaticalize? Generally, classifier constructions serve as a source for lexicalization (Janzen 2012) and we might guess that this also holds true for classifier based serial constructions but there is little evidence currently available. A different type of symmetrical serial verb construction may provide some insight: in addition to constructions expressing cause-effect and manner, section 2.1 also mentioned serial verb constructions depicting action sequences, exemplified in (1). I cannot find clear examples of serial verb constructions of this type in sign languages, but verbal compounds such as THINK^HOLD (Auslan, Johnston & Schembri 2007: 132) or THINK^MARRY (ASL, Liddell & Johnson 1986: 490), both meaning ‘believe’, may have evolved from some sort of serial verb construction. Indeed, the examples of lexicalized symmetrical constructions in the

spoken language Igbo given in (8) have close parallels in the corresponding LSE verbal compounds, shown in (13), and will probably look familiar to researchers of other sign languages.

(13) a. SAY^SPREAD
'spread information, rumours'

b. KNOW^DISAPPEAR
'forget'

LSE

Needless to say, much of this is highly speculative, but the evidence from sign languages suggests that symmetrical serial verb constructions show the same patterns as they do in spoken languages.

Turning to asymmetrical serial verb constructions, sign languages also show a patterning that fits with the taxonomy developed for spoken languages. In 2.1 we saw that asymmetrical constructions can express direction, aspect or valency changing mechanisms, as exemplified in (4), (5) and (6)-(7), respectively. Directional serial verb constructions have been reported for Adamarobe Sign Language (AdaSL), although this may well be due to contact with the surrounding spoken language, Akan, which has similar serial verb constructions (Nyst 2007). In (14), the major verb TAKE is accompanied by the minor verb ABRUPT (a directional that is used to express the meaning 'throw', 'send', or 'fall'), which is spatially directed toward a location associated with the city Accra.

(14) SCHOOL SMALL FINISH IX_1 TAKE $ABRUPT_{ACCRA}$
'She will finish her school soon and then I will send her to Accra'

AdaSL (Nyst 2007: 189)

Completive aspect is marked in many sign languages by a sign derived from a verb meaning 'finish', as can be seen in the Italian Sign Language (LIS) example in (15), in which the verb BUY is followed by DONE (which has the same form as a verb meaning 'finish'). This second sign is normally analysed as a grammaticalized marker but is the result of a well attested grammaticalization path that at one point involved the use of the verb to express aspect (Pfau & Steinbach 2006). Thus, aspect can be expressed by some sort of serial verb construction, and, furthermore, such a construction can grammaticalize into an aspectual marker, complying with the tendency of asymmetric constructions to grammaticalize (rather than lexicalize).

(15) GIANNI HOUSE BUY DONE
'Gianni has bought a house'

LIS (Zucchi, Neidle, Geraci, Duffy & Cecchetto 2010: 214)

Valency increasing serial verb constructions have been identified in HKSL, using 'give' to mark benefactives and 'take' to introduce an instrumental. In (16), the verb BUY is accompanied by the minor verb GIVE in order to express the benefactive of the action, as also occurred in Saramaccan Creole in (6). In contrast, the verb CUT is accompanied by the minor verb TAKE in (17) in order to express the instrumental KNIFE, similarly to the Tetun Dili

construction in (7). Note that the order of the major and minor verbs differs in each construction: another marker of asymmetrical constructions is the relatively free order of the verbs.

(16) SISTER EGG-CAKE BUY $_0$GIVE$_3$ MOTHER
'The sister bought a birthday cake for mother'

(17) BOY CARROT CL:carrot located KNIFE TAKE CUT
'The boy cut the carrot with the knife'

HKSL (adapted from Lau 2010)

To recap, we have seen that asymmetrical serial verb constructions exist in sign languages, and that they show similarities with those of spoken languages: they express the semantic functions of direction, aspect or adding valency (benefactives or instrumentals), the order of the constituent verbs is relatively free, and they tend to grammaticalize. These properties contrasts with those of symmetrical constructions, which tend to express action sequences, cause-effect or manner, the verb order is often governed by temporal iconic considerations, and they are prone to lexicalization. As such, serial verb constructions in sign languages fit into the patterns attested for spoken languages. In this context, how do the constructions described by Bos contribute to the picture?

2.3 Verb constructions in NGT: Bos' contribution

Given the distinction for different types of symmetrical and asymmetrical verb constructions described in section 2.1 and confirmed for sign languages in section 2.2, where do the NGT constructions examined by Bos fall within this scheme? The distinction that Bos makes between the fixed and the free verb in the constructions that she describes appears to correspond to the minor and major verbs that we have identified for asymmetric constructions. Indeed, Bos herself points out that the minor verbs are lexical items that are commonly found in this category crosslinguistically: 'give', 'take', 'call' and 'go'. In the preceding two sections we have seen examples from spoken and sign languages involving three of these verbs. I look at these three verbs first before turning to 'call', which is somewhat different.

The verbs GIVE and TAKE both combine with other verbs that express some notion of transfer, whether that be literal, as in 'buy' or 'borrow', or more metaphorical, as in 'order' or 'look-after'. Given what we saw in sections 2.1 and 2.3, we expect these verbs to form constructions that serve to increase valency. This seems to be the case: for verbs like BUY, PAY or SELL, the minor verb GIVE introduces the benefactive or goal. In contrast, as a minor verb TAKE introduces the source. Further support for classifying these verb combinations as asymmetrical serial verb constructions comes from the existence of an auxiliary verb derived from the verb GIVE in the neighbouring Flemish Sign Language (Van Herreweghe & Veermeerbergen 2004): the tendency of these constructions to grammaticalize would explain the formation of an auxiliary from the minor verb GIVE. However, it is not clear that these

constructions always increase valency: does the combination LOOK-AFTER GIVE yield the meaning 'look after something for somebody', thus introducing a benefactive, or simply 'look after somebody'? If the latter is the case, the serial verb construction does not increase valency and appears merely to mark the semantic roles of the (major verb's) arguments. Bos points out that the minor verbs are all agreeing verbs and serve to mark agreement, and also highlights an interesting phenomenon with these verb constructions, which she calls 'opposite perspectives', in which the transfer denoted by the minor verb is contrary to that of the major verb. This raises interesting questions that will be addressed in section 3.3 below.

The minor verb GO combines with verbs of motion and falls into the category of directional asymmetrical constructions, of the type attested in AdaSL and various spoken languages. It is of note that this type of construction is not more widely attested in sign languages. This may be due to the scant attention that serial verb constructions have received in the sign language literature. Additionally, the spatial nature of directional verbs may lead to these constructions being lumped in with symmetrical constructions involving classifiers. It is clear that we need to look more carefully at verb serialization in the sign languages we study.

For the remaining verb, CALL, Bos suggests that this verb functions as a marker of direct speech, and in various languages verbs of speech must form an (asymmetrical) serial verb construction with the verb 'say' to introduce a direct speech complement (Aikhenvald 2006: 25). Crosslinguistically the transformation of verbs of saying into complementizers is well attested (Heine & Kuteva 2002), again confirming the grammaticalizing tendency of asymmetrical serial verb constructions. Subsequent work on NGT has confirmed that CALL has not generalized to a complementizer and is restricted to verbs of saying (van Gijn 2004). The constructions involving CALL also include role shift, and I will return to this issue in the examination of how well these constructions comply with Haspelmath's definition of serial verb constructions.

To conclude, the serial verb constructions described by Bos are of the asymmetrical type, expressing direction and increasing valence. The NGT data add to the scarce information available on verb serialization in sign languages, especially beyond the symmetrical classifier verb serializations that have been described in the context of work on classifier constructions. Additionally, the NGT constructions present interesting properties that will be drawn out in the analysis of the phenomenon in terms of a crosslinguistically valid definition of serial verb constructions.

3 Comparing serial verb constructions crosslinguistically

In the previous section we looked at how serial verb constructions pattern based on Aikhenvald's (2006) extensive survey of the phenomenon across different languages of the world. A slightly alternative approach is taken by Haspelmath (2016), who sets out to provide a framework that makes crosslinguistic comparison possible. Instead of taking a broad, loose characterization of serial verb constructions, Haspelmath constrains the phenomenon with a more rigidly specified definition that captures a narrower range of structures. The advantage of this approach is to create a comparative concept that allows for meaningful generalizations.

The two approaches are valuable and have different goals, and, as I hope this commentary will prove, may be used in a complementary fashion. Haspelmath recognizes that the full range of serial verb constructions in a given language may not fit to his comparative category, requiring a language-specific descriptive category. Nevertheless, he stresses the importance of pursing meaningful crosslinguistic generalizations, for which a useful comparative category is the starting point.

In the following sections I outline Haspelmath's proposal, detailing his comparative definition of serial verb constructions (section 3.1) and outlining the generalizations that follow from this definition (section 3.2) before returning to the NGT data to see how they stand up against Haspelmath's definition and generalizations (section 3.3).

3.1 A crosslinguistic definition of serial verb constructions

The definition of Haspelmath's comparative category of serial verb constructions is as follows:

> A serial verb construction is a monoclausal construction consisting of multiple independent verbs with no element linking them and with no predicate-argument relation between the verbs. (Haspelmath 2016:296)

The definition rests on five key components, which are underlined above. For a full explanation of Haspelmath's reasoning and motivation, the reader is directed to his article, but I provide here a brief explanation of each component. That a serial verb construction must be monoclausal is an uncontroversial claim. From a diagnostic point of view, this property equates with 'single negatability': if one of the two verbs can be independently negated, the structure does not qualify as a serial verb construction. A 'construction' refers to a construct that is compositional (the meaning can be derived from the meaning of the constituent parts) and productive. This excludes idiomatic and irregular verb serializations that do not lend themselves to cross-linguistic comparison. The verbs must be independent in the sense that they can appear in isolation without another verb. This excludes auxiliary verbs and other grammaticalized elements. The absence of a linking element, such as a coordinator or subordinator, is another commonly used criterion for serial verb constructions since such an element would indicate that the structure is not monoclausal. Finally, the verbs should bear no predicate-argument relationship to each other; if such a relationship holds (as in 'He made me weep') one verb is part of the argument structure of the other verb, and not an instance of serialization.

3.2 Generalizations arising from Haspelmath's definition

The narrow concept of serial verb constructions set out in the previous section provides useful crosslinguistic insight in the form of ten generalizations:

1. The verbs have the same tense value.
2. The verbs have the same mood value.
3. The verbs do not have separate temporal or event-locational modifiers.
4. The serial verb construction is pronounced with a single intonation contour.
5. If a cause-effect relationship or sequential event is expressed, the order of the two verbs is tense-iconic.
6. If there is just a single person, tense, mood or negation marker, it occurs in a peripheral position (i.e. preceding the first verb or following the last verb).
7. The verbs share at least one argument
8. If a language has serial verb constructions, it has same-subject serial verb constructions (and may also have other types).
9. In different-subject serial verb constructions, the second verb is always intransitive.
10. A serial verb construction cannot have two different agents.

(Haspelmath 2016:307-311)

Haspelmath is cautious to qualify these generalizations as tentative proposals based on his knowledge of the literature but also makes clear that his aim is to identify universal properties of serial verb constructions. As such, the generalizations are open to empirical testing against the languages of the world. We now turn to the serial verb constructions of NGT (and other sign languages) to try out these generalizations.

3.3 Adding sign language data to the crosslinguistic comparison

Armed with the definition and generalizations for serial verb constructions provided by Haspelmath (2016), this section examines whether the NGT data fall within this narrower definition and comply with the proposed universal properties of these structures. Bos explicitly shows that the NGT structures she describes are monoclausal, and uses the diagnostic test that Haspelmath proposes, namely negatability.

The NGT structures appear to be constructions in the sense that they are productive and compositional, although a qualification should be made regarding the compositionality of meaning. Bos points out that the minor verb "does not add meaning" to the serial verb construction and only serves to mark the agreement relations. This issue is not critical for at least two reasons. Firstly, agreement relations may be considered a type of meaning; just as aspect (a meaning that is also more typically encoded grammatically) may be expressed by the minor verb of a serial verb construction, agreement relations may also be the meaning contribution of the minor verb. Secondly, the agreement relations also express transfer, a more tangible semantic content.

The verbs involved in the NGT constructions are independent since they may appear on their own. It is worth pointing out that this is not always the case for serialized verbs: once a verb has undergone a process of grammaticalization to form some sort of marker, it may look very much like the lexical verb from which it derived but there may be subtle differences in form and distribution. For example, the completive aspectual marker can be distinguished from the corresponding verb in both ASL (Fischer & Gough 1999) and LIS (the sign DONE in

(15) above) (Zucchi, Neidle, Geraci, Duffy & Cecchetto 2010).

The serial verb constructions in NGT have no linking element, or at least no manual linking element. Given the importance of nonmanual markers in sign languages, it is not a trivial question to ask whether the verbs are linked by nonmanual elements. In those NGT examples for which the transcription includes information about nonmanual markers, there do not appear to be any specific markers that link the two verbs in the serial constructions. However, since nonmanual markers are so easy to overlook, serial verb constructions of this type merit closer examination to see if there is any systematic associated nonmanual behaviour. One possible candidate for a linking element is nonmanual marking associated with role shift, which Bos discusses in the context of the minor verb CALL.

The final defining property of serial verb constructions, namely, the absence of a predicate-argument relationship between the verbs, also seems to hold for the NGT constructions. I do not think enough is currently known about argument structure in sign languages to provide strong evidence that shows that one verb is not an argument of the other, but I think that the semantics and the relative independence of the verbs allows us to lean towards treating the verbs as having independent argument structures.

By and large, then, the NGT serial verb constructions fall within Haspelmath's narrow definition. We now consider whether they also fulfill the generalizations that arise from this crosslinguistic category. Of the ten generalizations, the first two, concerning tense and mood values, are difficult to apply to sign languages, which tend not to have overt morphological markers for these values (Pfau, Steinbach & Woll 2012). The third generalization, the impossibility of each verb having separate temporal or event-location modifications, is an empirical question but none of Bos' examples contemplate this possibility. The fourth generalization is fulfilled by the NGT structures as Bos states that they fall within a single intonational contour. The fifth generalization is not applicable to the NGT constructions since none of them expresses cause-effect or an event sequence. Note that the serial verb constructions in other sign languages that do fall into these sub-types (described in section 2.2) do conform to the temporal iconic ordering that this generalization predicts.

The sixth generalization refers to the linear position of a single marker of person or negation, which must appear either before or after the verb construction (but not in the middle). The issue of the ordering of elements in sign languages is complicated on two counts. Firstly, the existence of nonmanual markers means that a marker may appear simultaneously with other elements and may even spread over several elements. This is precisely the case for some negation markers, which typically involve headshake coarticulated with the negated verb. Analyses that associate the headshake with a functional projection (which would contain the monoclausal serial verb construction rather than lie within it) and allow the headshake to spread over neighbouring elements (see, for example, Pfau & Quer 2007) provide an account of the facts that complies with this generalization. The proviso that a phonological feature may spread does not present major problems and is also seen in spoken languages in phenomena like vowel harmony. The second issue for linearity is the spatial modification of verbs, and this is relevant for the marking of person. In all of Bos' examples, the minor verb is inflected spatially to agree with the subject and object, at the beginning and end, respectively,

of a verb like GIVE. There are no examples with just a single agreement marker, but given the tendency for the subject marker to be omitted in verbal agreement (what Padden (1988) called agreement marker omission), where would a single marker appear in a serial verb construction? In the case of a verb like GIVE or CALL, the object marker would appear at the end of the verb and thus at the edge of the serial verb construction. However, for a backwards verb like TAKE, the object marking would appear at the beginning of the verb, which would mean that the marker would be internal to the construction. For this to represent an exception to the generalization, it needs to be shown that agreement marker omission can indeed occur with serial verb constructions of this type. Furthermore, even if this does occur, the relationship between spatial marking and linear order in backwards verbs is a debated topic and may involve additional factors (such as considerations of iconicity, Quadros & Quer 2008).

Both the verbs in the serial constructions in NGT share at least one argument, thus fulfilling the seventh generalization. Furthermore, in some of the serial constructions the verbs have the same subject, so the eighth generalization also holds for NGT.

The last two generalizations do not hold for the NGT constructions, and this is due to the phenomenon of opposite perspectives, in which the subject of the first verb is the object of the second verb, as reproduced here as (18). In these structures, the verbs have different subjects and yet the second verb is not intransitive, as generalization 9 stipulates. Furthermore, the subjects of the verbs are both agents, thus contravening generalization 10 that a serial verb construction cannot have two different agents.

(18) IX_2 $\underline{BUY}$ $_1\underline{GIVE_2}$
'You bought it from me' NGT (adapted from Bos 2016)

To resolve this issue, we have two options: either we reconsider the status of these structures as serial verb constructions, or we take them as evidence that generalizations 9 and 10 do not hold. Given that these structures involve different perspectives, they may involve some sort of role shift. This brings us back to the issue of nonmanual markers that may be linking the two verbs. It is, of course, an empirical question whether or not these structures include nonmanual linkers that would exclude them from meeting the criteria for being included in the category of serial verb constructions. Even in the absence of explicit nonmanual markers, the (covert) presence of role shift may involve more complex structure (Lillo-Martin 1995). This would exclude these structures due to a different defining property: monoclausality. In addition, the verbs involved in these opposite perspective constructions ('buy', 'borrow/lend') are relational, and thus belong to a common semantic subclass. It may be the case that verbs from this subclass fail to form serial verb constructions, creating a different type of structure when they combine with other verbs. As things stand, we have reasonable motives for questioning the status of these opposite perspective structures, making it difficult to use them as counterevidence for generalizations 9 and 10. More data are needed together with a better understanding of how role shift interacts with agreement and clausal structure in sign languages.

In this section we have seen that the NGT structures characterized by Bos as serial verb constructions qualify as such in terms of Haspelmath's narrow definition. The one possible exception is the opposite perspectives structure, and if these are excluded, the remaining structures confirm the ten generalizations that follow from the narrow definition of serial verb constructions.

4 Conclusion

This commentary has attempted to resituate the phenomenon described by Bos in the current state of the art, taking advantage of the 20 years of advances that have taken place since Bos carried out her work. Bos' study represents an important development because she identified a type of serial verb construction that had not been described in the sign language literature, namely asymmetrical constructions. These constructions not only lie closer to the core crosslinguistically relevant concept of serial verb constructions as defined by Haspelmath (2016) (in contrast to symmetrical constructions, which tend to be lexicalizing and more idiomatic), but are also a source for grammaticalization processes that give rise to functional elements in the language. Unencouragingly, virtually nothing else has been added to the literature on asymmetrical serial verb constructions in sign languages in the intervening years, and the only other source of information I have been able to find, Lau's (2010) study of HKSL, is also, unfortunately, unpublished.

Bos' study also identifies an intriguing phenomenon in the shape of opposite perspective constructions, which appear to push the limits of our concept of serial verb constructions. It may well be that a language-specific characterization of serial verb constructions includes structures (such as these) that fall outside the limits of the narrower crosslinguistic definition and this is a possibility that Haspelmath contemplates. Whatever the case, Bos' data should spur us on to investigate how role shift, agreement and clause structure work in sign languages, and what this can tell us about languages in general.

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