

(ed.), *First and second language acquisition processes*, 252-72. Rowley, MA: Newbury House.
 Weinrich, Harald. 1994. *Tempus: besprochene und erzählte Welt*. Stuttgart: W. Kohlhammer.

Anna Flyman Mattsson, Institutionen för humaniora och samhällsvetenskap, Högskolan Kristianstad. <Anna.Flyman-Mattsson@husa.hkr.se>

Verb serialization in Kammu

Arthur Holmer¹

1 Background

1.1 Kammu – general properties

Kammu is spoken by approximately 500,000 people primarily in northern Laos, northern Thailand, and northwestern Vietnam. It belongs to the Khmuic branch of Mon-Khmer languages. It is an isolating language, with no inflectional morphology and little derivational morphology (basically causatives and nominalizations). Word order is SVO, NA, NG and prepositional. Kammu *wh*-questions are formed by means of *wh*- in situ. Anaphoric relations can reach across clause boundaries: an anaphor in an embedded clause can be bound by the matrix subject. Some relevant examples are given in (1).

- 1 a. yòŋ ò cú pə məh rùŋ
 father 1s want eat rice steam
 'My father wants to eat steamed rice.'
- b. mēə kùuŋ mə?
 2sm see who?
 'Who did you see?'
- c. kəə wəc tàə kàaŋ tēə
 3sm return LOC home REFL
 'He returned to his home.'
- d. ò wèet tráak nám
 1s buy buffalo big
 'I bought a big buffalo.'

¹This paper represents partial results of the research project *Kammu reference grammar* (Holmer, Svantesson & Tayanin), funded by The Swedish Research Council. The data upon which this paper is based derives in its entirety from the Kammu native speaker Damrong Tayanin. I hereby gratefully acknowledge his patient help and guidance, without which none of the work reported here would have been possible. Naturally, any mistakes are mine and mine alone.

e. nàa tèn tàa rn-tèn
3sf sit LOC NOM-sit
'She is sitting in a chair.'

f. ò cəə pk-?wɛak tráak tɛɛ
1s IRR CAUS-drink buffalo REFL
'I will water my buffalo.'

g. ò_i ŋò nàa_j cəə tɛɛ kóon tɛɛ_{i/j}
1s fear 3sf IRR hit child REFL
'I'm afraid she may hit my / her child.'

h. ò_i ŋò nàa_j cəə tɛɛ tɛɛ_{i/*j}
1s fear 3sf IRR hit REFL
'I'm afraid she may hit me / *herself.'

1.2 Serial verb constructions

Various prototypical properties have been attributed in the literature to serial verb constructions (henceforth SVCs): shared arguments, defined either in terms of grammatical relations (e.g. subjects) or in terms of argument structure and semantic role (e.g. patients), shared tense, and shared propositional truth value. These all derive from the single most salient property of SVCs, namely that each construction represents a single event, and that the verbs in an SVC serve to express various facets of this event in different ways. In this paper, it will be assumed that this is the basic defining characteristic of an SVC. Other properties, in particular argument-sharing properties, will be seen as cross-linguistic or language-specific consequences of this.

2 Serial verb constructions in Kammu

Many grammatical relations between predicates in Kammu are expressed by means of what can be referred to impressionistically as verb concatenations. These are of various types, which can be distinguished according to various parameters, e.g. the presence or absence of subject markers, the (obligatory or optional) presence or absence of conjunctions or other linkers, the function of the construction itself and the coreference relations between the arguments of the two verbs. I have chosen to classify SVCs in terms of their function, rather than on other criteria. Nothing hinges on this choice except that it appears that such a classification illustrates, better than any other, the semantic relations between the verbs involved.

Having defined SVCs in 1.2 as constructions which make use of several verbs to denote a single event, the problem remains to define how an event is to be recognized. Ideally, we would wish to find a syntactic definition which

can be applied across the board, without having to refer to the nuances of meaning of each separate example. Since Kammu has no morphological marking of tense / aspect on the verb itself, the idea of tense-sharing does not seem particularly promising. However, the behaviour of the preverbal irrealis / future marker *cəə* will be applied as a test. If *cəə* can be inserted between two verbs (henceforth V1 and V2), this is interpreted as a delay between the realizations of V1 and V2, i.e. implying that we are dealing with two events.

Thus, in (2a), V1 and V2 may or may not be interpreted semantically as two facets of the same event (depending on how wide our definition of an event is). However, in (2b), the insertion of *cəə* shows that (2b) clearly involves two events, since a delay is explicitly encoded between the actions represented by V1 and V2 respectively and that (2b) is therefore not an SVC.

2 a. ò wɛɛt plé pn-màh kóon tɛɛ
1s buy fruit CAUS-eat child REFL
'I bought fruit to feed my child.'

b. ò wɛɛt plé cəə pn-màh kóon tɛɛ
1s buy fruit IRR CAUS-eat child REFL
'I bought fruit to feed my child later.'

Crucially, since there is no major change in meaning between (2a) and (2b), other than the delay itself, it follows that (2a) is not an SVC either, but rather contains a purpose clause. If, on the other hand, the addition of *cəə* had changed the entire interpretation of the construction (we will see examples in section 2.4), this would be evidence that the construction lacking *cəə* is an SVC whereas the construction containing *cəə* is not.

The importance of using the distribution *cəə* as a syntactic criterion, rather than impressionistically addressing the interpretation of each example, will become clear in section 2.5, where two examples which are linearly identical and semantically comparable are shown to be syntactically quite distinct by means of this test.

2.1 Prototypical SVCs and motion verbs

The most prototypical kind of serial verb construction in Kammu is, as in other serial verb languages, that used with motion verbs. We shall use this type as a base from which to explore other types. SVCs of motion in Kammu can involve the use of a substantial number of verbs, denoting manner, path, directionality, target, etc. Example (3) is a more or less maximal example.

- 3 ò tàr là p̄rì cùur r̀òt tàa kún̄j
 1s run go.through.undergrowth forest descend arrive LOC village
 'I ran down through the undergrowth to get to the village'

SVCs of motion have a strict linear ordering – any change in the order of the verbs results in marginality or ungrammaticality (4).

- 4 a. ?ò tàr cùur là p̄rì r̀òt tàa kún̄j
 1s run descend go.through.undergrowth forest arrive LOC village
 b. ?ò là p̄rì tàr cùur r̀òt tàa kún̄j
 c. *ò cùur là p̄rì tàr r̀òt tàa kún̄j
 d. *ò cùur tàr là p̄rì r̀òt tàa kún̄j

While the other elements of a serial verb construction conspire to produce a given reading of the action itself, the resultative element (e.g. *r̀òt* 'come' in (3)), which is, if present, obligatorily SVC-final, rather contributes to the Aktionsart. Semantically, this distinction may be rather subtle, but the syntactic consequences are important. A resultative may not appear in an irrealis clause (5a), a negated clause (5b) or together with a modal auxiliary (5c). The same examples also illustrate that omitting the resultative ensures grammaticality.

- 5 a. ò cəə tàr (*r̀òt) tàa kún̄j
 1s IRR run arrive LOC village
 'I will run to the village.'
 b. ò p̄əə tàr (*r̀òt) tàa kún̄j
 1s NEG run arrive LOC village
 'I didn't run to the village.'
 c. ò cú tàr (*r̀òt) tàa kún̄j
 1s want run arrive LOC village
 'I want to run to the village.'

If the resultative is used specifically with irrealis *cəə*, the construction can be rescued by anchoring the event by means of a temporal adverb (6a), an option not open with negation or modal auxiliaries. Alternatively, the SVC can be split up using the particle *ùn* 'PURPOSE' (< *ùn* 'give, let'), as in (6b).

- 6 a. kəə cəə tàr r̀òt tàa kún̄j *(síipàn̄)
 3sm IRR run arrive LOC village tomorrow
 'He will run all the way to the village tomorrow.'

- b. ò cəə tàr *(ùn) r̀òt tàa kún̄j
 1s IRR run to arrive LOC village
 'I will run to get to the village.'

Another important feature of resultatives is that they are subject to certain cooccurrence restrictions concerning *wh*-phrases. A locational goal may be questioned with a *wh*-phrase (7a). On the other hand, it is at best marginal to question the subject of the construction (7b). Instead, a cleft is used (7c).

- 7 a. m̄èè tàr r̀òt tàa m̄è?
 2sm run arrive LOC where?
 'Where did you run all the way to?'
 b. ?m̄è tàr r̀òt tàa kún̄j
 who? run arrive LOC village
 I.R: 'Who ran all the way to the village?'
 c. m̄èh m̄è tàr r̀òt tàa kún̄j
 be who? run arrive LOC village
 'Who was it that ran all the way to the village?'

Resultatives are most felicitous when the event of which they denote the result is referential, i.e. in a declarative realis clause. Therefore, tests concerning the behaviour of *cəə* must necessarily be applied to examples without a resultative. Applying the insertion of *cəə* between V1 and V2 as an SVC test, we see that motion SVCs clearly qualify as SVCs (8a, b). Further, we see that a negation may not be inserted either between V1 and V2 (8c).

- 8 a. ò cəə tàr (*cəə) cùur tàa kún̄j
 1s IRR run IRR descend LOC village
 'I shall run down to the village.'
 b. ò tàr (*cəə) cùur tàa kún̄j
 1s run IRR descend LOC village
 'I (*shall) run down to the village.'
 c. ò tàr (*p̄əə) cùur tàa kún̄j
 1s run NEG descend LOC village
 I.R: 'I didn't run down to the village.'

It is hard to find a context in which it is felicitous to negate an SVC of motion, unless some further information is added to the clause. When this occurs, the most natural interpretation seems to depend entirely on the context (9).

- 9 a. ò pəə tàr cùur tàa kúŋ ?(mèe kàay lla ò tàr)
 1s NEG run descend LOC village 2sm still say 1s run
 'I didn't run down to the village, but you still claim that I ran.'
 (I came down to the village, but not running)
- b. ò pəə tàr cùur tàa kúŋ, ò tàr yòh tàa ré
 1s NEG run descend LOC village 1s run go LOC field
 'I didn't run down to the village, I ran to the fields.'

Incidentally, the relationship between manner and motion can also be expressed with adverbs derived from verbs of manner, but not verbs of motion (10a, b). This is exactly analogous to the situation holding in a verb-framed language such as Spanish² (Talmy 1985).

- 10 a. ò cùur tŋ-tàr
 1s descend ADV-run
 'I ran down. / I descended running.'
- b. *ò tàr tŋ-cùur
 1s run ADV-descend

Taking motion SVCs as a prototype, we now compare other constructions to determine which features can be considered typical of SVCs.

2.2 Argument sharing

Where intransitive verbs of motion are concerned, argument sharing ensues as a matter of course. The single argument of each of the verbs of motion must necessarily be identical, otherwise we could not be dealing with a single instance of predication. It is therefore particularly interesting to investigate what happens when one of the verbs is transitive. Observe the following examples with a verb expressing caused movement (11).

- 11 a. ò (*cəə) wát àh kùut tàa cèek
 1s IRR throw meat enter LOC drying-basket
 'I *will throw / threw the meat into the drying-basket.'
- b. ò cəə wát àh ùun ?(kəə) kùut tàa cèek
 1s IRR throw meat let 3sm enter LOC drying-basket
 'I will throw the meat into the drying-basket.'

The first point to note is the cooccurrence restriction on the irrealis marker *cəə* and the resultative final verb (11a). If the irrealis marker is present, the

²A relevant example would be Spanish *Salió corriendo*, lit. 'S/he exited running.', i.e. 'S/he ran out.'

construction can be rescued using *ùn* 'let', splitting the SVC (11b). With transitives the use of *ùn* requires the resumptive pronoun *kəə* '3sm'.

SVCs of caused motion also respect the same *wh*-restrictions as intransitive motion SVCs. While the goal location may be questioned with a *wh*-word (12a), neither the patient (12b) nor the causer (12c) may be *wh*-questioned, unless the event is made referential with an adverbial.

- 12 a. mèe wát sʔóŋ k'ruk tàa mè
 2sm throw stick fall LOC where?
 'Where did you throw the stick so it fell?'
- b. mèe wát mǎh k'ruk tàa òm *(knàay)
 2sm throw what? fall LOC river there/that
 'What did you throw so that it fell into the river there?'
- c. mè wát àh kùut tàa cèek ??(knàay)
 who? throw meat enter LOC drying-basket that/there
 'Who threw the meat all the way into that drying-basket?'

Caused-motion SVCs are parallel in behaviour to intransitive motion SVCs. In both cases, the resultative requires the event to be referential, precluding irrealis and *wh*-interrogatives, unless referentiality is otherwise ensured. However, the two SVC types have different argument sharing properties. For the intransitives, the shared argument is the subject. For transitives, the object of V1 is the subject of V2. According to Baker's 1989 or Collins' 1997 treatment of SVCs, this is not a problem, since it can be argued that the controlling argument is, in both cases, the Patient of V1, and the controlled argument is the Patient of V2. Thus, it would appear, at first blush, that argument sharing in Kammu SVCs supports Baker's and Collins' view that the shared argument in an SVC is an internal argument of both verbs (13).

- 13 INTRANSITIVES: [V1 TH_i] [V2 Ø_i(=TH)]
 TRANSITIVES: [AGT V1 TH_i] [V2 Ø_i(=TH)]

The schema in (13) does not only hold for verbs of caused motion. Other types of verbs, with more prototypical patients, follow the same pattern (14).

- 14 a. kəə tí tráak tèe háan
 3sm beat buffalo REFL die
 'He beat his buffalo to death.'

- b. kəə kñúus kóon tɛə krɬaŋ
 3sm push child REFL fall
 'He pushed his child so it fell.'

Further, similar restrictions concerning *wh*-interrogatives and irrealis mood hold with these examples. Neither a causer (15a) nor a causee (15b) can be *wh*-questioned without an anchoring adverbial. Irrealis is marginal, but splitting the SVC with *ùn* results in grammaticality (15c).

- 15 a. mə kñúus mɛə krɬaŋ taa pté ?(kncə néey)
 who? push 2sm fall LOC ground yesterday then
 'Who pushed you so you fell to the ground?'
- b. mɛə kñúus mə krɬaŋ ?(kncə néey)?
 2sm beat who? fall yesterday then
 'Whom did you push so he fell yesterday?'
 (i.e. speaker saw action but is unsure of identity of victim)
- c. ɔ cəə kñúus ?(ùn kəə) krɬaŋ
 1s IRR push let 3sm fall
 'I will push him so he falls.'

The examples in (14) and (15) allow us to keep our generalization from (13), namely that the shared argument in an SVC is the Patient (or an internal argument). In fact, if we instead insert an unergative verb as V2 in the construction, this results in marginality or ungrammaticality (16a-c). Again, the construction can be rescued by splitting the SVC with *ùn* (16c).

- 16 a. ?kəə tɪi kóon tɛə yàam
 3sm hit child REFL cry
 I.R: 'He beat his child so it cried.'
- b. *kəə tɪi kóon tɛə əh káan
 3sm hit child REFL do work
 I.R: 'He beat his child so it worked.'
- c. ɔ tɪi só tɛə ?(ùn kəə) tù
 1s hit dog REFL let 3sm run.away
 'I beat my dog so it ran away.'

However, this does not imply that the resultative is necessarily an unaccusative verb. Firstly, stative verbs are subject to the same restrictions as unergative verbs in this position, irrespective of whether they take experiencer arguments (17a) or theme arguments (17b). Secondly, arguably unaccusative verbs of motion which clearly involve some degree of volitionality are equally

illicit as resultatives (17c). Thirdly, both statives and unergatives may appear in this position, provided they are accompanied by an expressive which denotes inchoativity and non-volitionality (17d, e, f). The importance of volitionality is particularly clear in the contrast between the minimal pair (17c) and (17g), where the latter does not involve any volition on the part of the subject of V2, and where V2 is therefore grammatical as a resultative.

- 17 a. *ɔ tɪi kəə yəm
 1s hit 3sm red
 I.R: 'I beat him until he was red.'
- b. *ɔ tɪi kóon tɛə mɔŋ
 1s hit child REFL sad
 I.R: 'I hit my child so it was sad.'
- c. *kəə tɪi kóon tɛə yəh taa ré
 3sm hit child REFL go LOC field
 I.R: 'He beat his child so it went to the fields.'
- d. ɔ tɪi kóon tɛə mɔŋ-ŋɬɬɬ
 1s hit child REFL sad-EXPR
 'I hit my child so it became sad.'
- e. ɔ tɪi só tɛə tù-sləət
 1s hit dog REFL run.away-EXPR
 'I hit my dog so it ran away.'
- f. kəə tɪi kóon tɛə yàam-críak
 3sm hit child REFL cry-EXPR
 'He beat his child so it cried out.'
- g. kəə kñúus kóon tɛə krɬaŋ taa pté
 3sm push child REFL fall LOC ground
 'He pushed his child so it fell on the ground.'

The behaviour of resultatives follows more or less automatically by definition. Given that a resultative indicates that V2 is a result of V1, V2 must imply a change of state, and can therefore not have a stative meaning. Further, since V2 must be an automatic consequence of V1, V2 cannot involve any volitionality and its subject must be non-volitional.

Unfortunately, it is impossible to use our SVC test on examples (17 d-f), due to another restriction on the cooccurrence of expressives with irrealis *cəə* (18a). However, the ungrammaticality of inserting a pronoun between V1 and V2 as subject of V2 suggests that we are, indeed, dealing with SVCs (18b).

- 18 a. *kəə cəə yàam-críak
 3sm IRR cry-EXPR
 I.R: 'He will cry out.'
- b. *ò tíi kónn tèe kəə mósŋ-ŋɣɿɿ
 1s hit child REFL 3sm sad-EXPR
 I.R: 'I hit my child so it became sad.'

The crucial facts shared by SVCs with a resultative verb is that they can not combine freely with irrealis *cəə*, and that the subject of the resultative may not be freely *wh*-questioned.

Further, as far as argument sharing is concerned, we must conclude that SVCs in Kammu do not necessarily imply sharing of an internal argument (contra Baker 1989 and Collins 1997), unless we can argue that the expressive itself can treat the Agent of V2 as its Theme, by virtue of expressing non-volitionality and / or inchoativity. This treatment is reminiscent of Jackendoff's 1990 distinction between two tiers in syntax. The exact application of Jackendoff's model is, however, outside the scope of this paper.

2.3 Resultativity and purpose

We have seen that ungrammatical SVCs can be rescued by splitting them into two verb constructions, each denoting one event. In practice, this results in an interpretation where V2 is the purpose, rather than the result, of V1. So far we have seen the use of the verb *ùn* 'let' in this context (19).

- 19 ò tíi só tèe ùn kəə tì
 1s hit dog REFL let 3sm run.away
 'I beat my dog so it ran away / to make it run away.'

This *ùn* construction is just a subset of purpose constructions, and these, as a whole, are not to be viewed as SVCs, since they allow the insertion of the irrealis *cəə* between V1 and V2 (20).

- 20 ò wèet plé (cəə) pn-màh kónn tèe
 1s buy fruit IRR CAUS-eat child REFL
 'I bought fruit to feed my child later.'

While purpose clauses are not SVCs, they are sometimes indistinguishable from them on the surface, unless the *cəə* test is applied (the results of which also tally well with native speakers' intuition that (20) represents two events, not one). For this reason, purpose clauses are relevant for comparison with

other constructions which are demonstrably SVCs, as will be done in the following sections.

2.4 Instrumental and simultaneity SVCs

In section 2.3 we saw that purpose constructions typically had transitive V1 and V2, and that subjects, but not necessarily objects, are shared. This description would, however, as it stands, cover equally well another class of constructions, namely instrumental SVCs, which are characterized by the object of V1 being the instrument with which the action denoted by V2 is performed. Instrumental SVCs differ sharply from purpose constructions in that *cəə*-insertion in instrumental SVCs changes the only possible reading from an instrumental reading to a purpose reading. While it is grammatical to add *cəə* to (21a), the fact that such an addition radically changes the interpretation of the clause shows that (21a), but not (21b), is an SVC.

- 21 a. kəə mɿt sʔósŋ tèe tíi nàa
 3sm take stick REFL hit 3sf
 'He hit her with his stick.'
- b. kəə mɿt sʔósŋ tèe cəə tíi nàa
 3sm take stick REFL IRR hit 3sf
 'He took his stick so as to hit her.'

Instrumental SVCs express the instrument used to perform the action of V2. A similar construction, which simply indicates simultaneity between V1 and V2, is distinguished from the instrumental in that the object of V1 is not interpreted as an instrument (22a). Further, V1 need not be transitive (22b).

- 22 a. kəə mət plé yəh taa ré
 3sm carry fruit go LOC field
 'He went to the fields carrying an apple.'
- b. kəə tən pè mäh
 3sm stand eat rice
 'He is standing and eating.'

This construction requires a static reading of V1, which tallies well with the function of indicating simultaneity. Given the static reading of V1, insertion of *cəə* leads to ungrammaticality rather than a purpose reading (23). This in fact leads to a methodological problem: since *cəə*-insertion is excluded from the simultaneity construction for independent reasons, it is perhaps not valid as a

test for SVC status as far as this construction is concerned. We shall treat it as an SVC for now, returning to this problem in section 3.

- 23 *kəə mət tɛy tɛ cəə yəh taa ré
 3sm carry bag REFL IRR go LOC field
 I.R: 'He carried his bag to go to the fields.'

Both instrumentals and simultaneity SVCs are compatible with irrealis cəə (24a, b) and the negation pəə. When the SVCs are negated, they are primarily interpreted as negating the content of V1 (24c, d).

- 24 a. kəə cəə mlat sʔɔŋ tɛ tii nàa
 3sm IRR take stick REFL hit 3sf
 'He will hit her with his stick.'
- b. kəə cəə mət tɛy tɛ yəh taa ré
 3sm IRR carry bag REFL go LOC field
 'He will take his bag with him to the fields.'
- c. kəə pəə mlat sʔɔŋ tɛ tii nàa
 3sm NEG take stick REFL hit 3sf
 'He didn't hit her with his stick (perhaps someone else's stick).'
- d. kəə pəə mət tɛy tɛ yəh taa ré
 3sm NEG carry bag REFL go LOC field
 'He goes to the fields without his bag.'

Finally, both instrumental SVCs and simultaneity SVCs display the same pattern with respect to *wh*-question formation. *Wh*-questioning the object of V1 is generally acceptable (25 a, b), whereas it is ungrammatical to *wh*-question the subject (25 c, d). *Wh*-questioning the complement of V2 is marginal (25 e, f) but much better than *wh*-questioning the subject.

- 25 a. mɛ mlat məh tii kəə?
 2sm take what? hit 3sm
 I.R: 'What did you hit him with?'
- b. mɛ mət məh yəh taa ré?
 2sm carry what? go LOC field
 'What did you carry going to the fields?'
- c. *mə mlat sʔɔŋ tii mɛ?
 who? take stick hit 2sm
 'Who hit you with a stick?'

- d. *mə mət tɛy yəh taa ré?
 who? carry bag go LOC field
 'Who carried a bag going to the fields?'
- e. ?mɛ mlat sʔɔŋ tii mə?
 2sm take stick hit who?
 'Who did you hit with a stick?'
- f. ?mɛ mət tɛy tɛ yəh taa mə?
 2sm carry bag REFL go LOC where?
 'Where did you go carrying a stick?'

To summarize, instrumental and simultaneity SVCs are rather similar, the main difference being the consequences of cəə-insertion. In the following sections we shall see other SVCs which cannot be split using cəə either.

2.5 Directionality

A transitive V2 can be combined with a V1 denoting movement or direction (26a). Semantically, the resulting construction appears to be indistinguishable from a purpose construction. However, there are two important syntactic differences between this directional SVC and a purpose construction. Firstly, it is sharply ungrammatical to insert irrealis cəə between V1 and V2 (26a). Thus, it appears that this kind of SVC can not be split. Secondly, the directional V1 may not take a locational complement (26b). If a locational complement is desired, it can only be inserted after the object of V2 (26c).

- 26 a. kəə yəh (*cəə) táp mɛn
 3sm go IRR set rat-snare
 'He goes to set rat snares.'
- b. *kəə yəh taa kúŋ pɹiaŋ wɛt tráak
 3sm go LOC village other buy buffalo
 I.R: 'He went to another village to buy a buffalo.'
- c. kəə yəh wɛt tráak taa kúŋ pɹiaŋ
 3sm go buy buffalo LOC village other
 'He went to buy a buffalo in another village.'

In contrast to the resultative SVC, there is no restriction against the use of the construction in irrealis (27) in the directional.

- 27 kəə cəə yəh táp mɛn
 3sm IRR go set rat-snare
 'He goes to set rat snares.'

If a directional SVC is negated, the scope of the negation is determined pragmatically, referring either to V1 (28a), V2 (28b) or both (28c).

- 28 a. kəə pəə yəh wəet tráak tàa kúŋ pɾiəŋ
 3sm NEG go buy buffalo LOC village other
 'He didn't go to buy buffaloes in another village (perhaps elsewhere).'
- b. kəə pəə yəh táp mèn
 3sm NEG go set rat-snare
 'He didn't go to set his traps (he maybe went for another reason).'
- c. kəə pəə yəh wəet tráak
 3sm NEG go buy buffalo
 'He didn't go to buy buffaloes (he probably didn't buy any).'

Finally, this type of SVC displays the same kind of *wh*-restriction as instrumentals: objects can be *wh*-questioned (29a), but the subject can only be questioned if the object is definite / specified (29b).

- 29 a. mēə yəh wəet məh?
 2sm go buy what?
 'What did you go to buy?'
- b. mə yəh wəet tráak ?(knəay)?
 who? go buy buffalo that
 'Who went to buy that buffalo?'

Thus, the most important defining characteristic of directional SVCs is that they can not be split with *cəə* into two events, and that *wh*-questioning the subject is marginal unless the event is anchored in some way.

2.6 Indirect object construction

The most remarkable SVC in Kammu is that used in double object constructions. An indirect object must be marked with what is sometimes described as an indirect object postposition, namely *tè*, which is synchronically identical to the verb 'to get'. Omitting this marker results in ungrammaticality. Relevant examples are given in (30).

- 30 a. ò ùun kəə *(tè) kmúul
 1s give 3sm IO money
 'I gave him money.'
- b. kəə cəə tè kmúul
 3sm IRR get money
 'He will get money.'

It might be argued that *tè* is only etymologically related to the verb 'to get' and that it is synchronically simply an indirect object marker. Support for this argument can be derived from the fact that *tè* in many cases has lost its lexical meaning, and can be used with indirect object constructions which do not involve the act of receiving anything concrete (31).

- 31 nðo ròos kəə tè
 3p angry 3sm IO
 'They are angry with him.'

However, the double object construction displays further complexities. When the relationship of the direct object to the indirect object is that of eating or drinking, *tè* can be replaced by *pə* 'eat' (32a) or *?wíak* 'drink' (32b). In fact, if *tè* is used in this type of construction, there is a corresponding semantic difference (32c, cf. 32a).

- 32 a. nàa káar ò pə àh hyíar
 3sf roast 1s eat meat chicken
 'She roasted chicken for me to eat.'
- b. kəə kəəŋ ò ?wíakpùuc
 3sm brew 1s drink wine
 'He brews wine for me to drink.'
- c. nàa káar ò tè àh hyíar
 3sf roast 1s IO meat chicken
 'She roasted chicken for me (I might give it away).'

Clearly, therefore, the double object construction still reflects to a certain extent the semantics of V2, although it appears to be in the process of grammaticalization. Thus, this construction can not be extended to other types of verbs where it might be natural to assume the same kind of relation (33).

- 33 a. ?kəə tòm nàa mùum òm
 3sm boil 3sf wash water
 I.R: 'He boils water for her to bathe in.'
- b. ?kəə wəet ò wàn tíaw
 3sm buy 1s wear trousers
 I.R: 'He buys trousers for me to wear.'

- c. *ò cəə rian mēe nəəŋ
 1s IRR teach 2sm know
 I.R: 'I shall teach you so you know.'³

The double object construction can not be split using cəə (34a), indicating that it is a clear instance of an SVC. If negated, the scope of the negation seems to cover the whole clause (34b), as opposed to the behaviour of the purpose construction with a similar meaning (34c).

- 34 a. *ò kóŋ mēe cəə ʔwíak pùuc
 1s brew 2sm IRR drink wine
 I.R: 'I brew wine for you to drink later.'

- b. ò pəə káar yòŋ tēe pə əh hyíar
 1s NEG roast father REFL eat meat chicken
 'I don't roast chicken for my father (probably doesn't roast at all).'

- c. ò pəə káar əh hyíar ùun yòŋ tēe pə
 1s NEG roast meat chicken give father REFL eat
 'I don't roast chicken for my father (probably for someone else).'

In this construction both the subject of V1 and the shared object can be *wh*-questioned freely (35a, b). However, the subject of V2 can only be questioned if the event is made referential, e.g. by specifying the object (35c).

- 35 a. mə káar mēe pə əh hyíar?
 who? roast 2sm eat meat chicken
 'Who roasted chicken for you to eat?'
- b. mēe káar kəə pə məh?
 2sm roast 3sm eat what?
 'What did you roast for him to eat?'
- c. mēe káar mə pə əh hyíar ʔ(knəay)?
 2sm roast who? eat that meat chicken that
 'Who did you roast that chicken for to eat?'

The most crucial difference between this type of SVC and more prototypical SVCs concerns argument sharing. In the double object SVC, the objects of V1 and V2 are coreferent, but the subjects are not.

³ Interestingly enough, exactly this construction is the only comparable one of which I am aware outside Kammu, namely the colloquial Cantonese phrase ʔə wā lēi ji 'I tell you' (lit. I say you know).

Table 1. Features of Kammu SVCs (...X... means 'X within an SVC')

	IRR	...IRR...	NEG ¹ ...	NEG...	COREF	WH ¹
1) RES.	*	*	*	*	V1.PAT=V2.NON-VOL	*V1.PAT
2) I.OBJ.	OK	*	total	*	V1.S≠V2.S V1.O=V2.O	*V2.S
3) DIR.	OK	*	var.	*	V1.S/PAT?=V2.S	*V1.S/PAT?
4) INSTR.	OK	*	V1	*	V1.S=V2.S	*V1.S
		(=>PURP)				
5) SIMUL.	OK	*	V1	*	V1.S=V2.S	OK
6) PURP.	OK	OK	V2	*	V1.S=V2.S	OK

3. Summary of SVC patterns

3.1 The surface facts

We have outlined five different types of SVCs in Kammu: resultative constructions, indirect object constructions, directional constructions, instrumental constructions and simultaneity constructions. In Table 1, the properties of these are contrasted with those of purpose constructions, which, we have argued, are not to be viewed as SVCs, given that they necessarily depict two events rather than one.

A couple of facts stand out clearly. While all the constructions involve argument sharing, there is no pattern common to all. Both 1 and 2 involve the sharing of PAT of V1 with an argument of V2 which is either an object (in 2), or at any rate non-volitional (in 1). Further, 3 arguably also involves argument sharing of PAT of V1 (since V1 must be an unaccusative motion verb), albeit with the subject of V2, regardless of thematic role. On the other hand, 4, 5 and 6 are characterized by subject sharing, again irrespective of thematic roles. Recall that 6 is not, according to our definition, an SVC at all.

Further, the interpretation of negation varies greatly across construction types. Negation is ungrammatical with 1, and refers to the entire SVC in 2, whereas its interpretation is pragmatically determined in 3. In 4-6, in contrast, the interpretation of the negation is relatively fixed, selecting one of the verbs (V1 in 4 and 5, V2 in 6). As far as 4-6 are concerned, it is interesting to note that the negation specifically refers to the verb that has what appears to be an adverbial function in the clause (instrument in 4, adverbial clause in 5 and purpose in 6)⁴.

⁴ Exactly the same situation obtains in English, where negation is primarily interpreted as referring to an adverbial. *He doesn't drive fast* usually means that he drives slowly, not that he doesn't drive at all.

Table 2. Prototypicality of Kammu SVCs

Type	1	2	3	4	5	6
Coreference controller	pat	pat	pat	sub	sub	sub
Coreference gap	pat ¹	pat	sub	sub	sub	sub
Single verb negation	(*)	-	-	+	+	+
* <i>wh</i> -questioning	V2S	V2S	V2S	V2S	-	-

As far as the ungrammaticality of *wh*-constructions is concerned, the coreference pattern confuses the issue to a certain degree. Certain positions are not realized in certain constructions, since they are obligatorily coreferent with preceding arguments. But if we abstract away from this, we see that for constructions 1 through 4, the argument which can not be *wh*-questioned is the subject of V2: either overtly, as in 2, or via coreference relations, as in 1, 3 and 4. In contrast, any argument can be *wh*-questioned in 5 and 6.

The generalizations are summarized in Table 2. In this context it is interesting to note that constructions 1 and 2 conform in their entirety to Collins' 1997 claim that SVCs must share an internal argument (albeit that Collins does not explicitly discuss the possibility of V1 and V2 having two different agentive subjects, as is the case in 2). Construction 4 incidentally also conforms to this pattern, if we follow Collins' assumption that instruments are also internal arguments (of V2). In construction 3, the only controller can be a patient, but it controls a subject gap. Constructions 4 through 6 define argument sharing entirely in terms of subjecthood.

Thus there seems to be a gradient as far as argument sharing from more prototypical to less prototypical SVCs according to Collins' definition. Other properties which seem to be typical of Kammu SVCs are present in a decreasing degree from constructions 1 through 6. It is difficult to determine a clear cutoff point – depending on which criterion we examine, the most restrictive cutoff point is presumably between 3 and 4, and the most liberal one between 5 and 6, taking the *cəə*-insertion test as criterion. However, as mentioned in section 2.4, construction 5 excludes *cəə*-insertion for independent reasons (since V1 must have a static reading). This could in fact imply that 5 is not an SVC at all, in which case a possible boundary coincides with the data from *wh*-question restrictions.

3.2 Negation, *wh*-questions and SVCs

The tables above show a set of properties which we have claimed are typical of SVCs in Kammu. We have not, however, discussed reasons why these properties should have any relevance for verb serialization, with the exception of argument sharing, which has been covered at length. The purpose of this final section is to speculate on whether the negation properties and *wh*-restrictions are coincidental or in some way related to the nature of SVCs.

The question of negation is relatively unproblematic. If a negation selectively negates the content of a single verb, this suggests that the two verbs encode separate predications. If, on the other hand, the negation negates both verbs equally, this rather suggests that they represent a single predication. Likewise, if the reference of the negation is determined pragmatically, it could, in principle, negate either verb to an equal degree, also suggesting that there is no syntactic mechanism forcing one interpretation above the other, in other words that there is no structural asymmetry between the verbs.

Wh-restrictions, on the other hand, represent a more subtle problem. First, it should be noted that none of the restrictions outlined above can be attributed to purely structural considerations: if they could, we would not find that the *wh*-question can be rescued by temporal adverbs or demonstratives specifying the object. Rather, the reason must be semantic or pragmatic. The subject of V2 can only be questioned if the remainder of the clause is temporally or spatially anchored. Why should this be a typical property of SVCs?

Wh-constructions can typically have two interpretations: either a) the existence, but not the identity, of the questioned element is known; or b) neither the existence nor the identity is known. In the first case, the *wh*-question can be replaced with a clefted *wh*-question, in the second case it cannot. If the predicate of a clause is expressed by a serial verb construction, the verbs generally complement one another in supplying further information about the status of the arguments. In this sense, the presence of more than one verb (i.e. an SVC) generally presupposes at least the existence of the argument to which it refers. This further implies that only the identity, not the existence, of the relevant argument can be questioned felicitously, and one way to ensure this interpretation is to anchor the entire predicate in such a way that the *wh*-question becomes tantamount to a cleft.

4 Conclusion

In this paper, it has been shown that several constructions in Kammu display, to a varying degree, cross-linguistic and language-internal properties typically attributed to SVCs. This generates an interesting problem for theoretical accounts of SVCs to date: assuming that there is a single valid test for distinguishing SVCs from constructions such as covert coordination, the common properties which are shared across the resulting boundary must still be accounted for, either by means of structural parallels or by means of surface analogy.

References

- Baker, Mark. 1989. 'Object sharing in serial verb constructions'. *Linguistic inquiry* 20, 513-53.
- Collins, Chris. 1997. 'Argument sharing in serial verb constructions'. *Linguistic inquiry* 28, 461-97.
- Jackendoff, Ray. 1990. *Semantic structure*. Cambridge, MA: MIT Press.
- Talmy, Leonard. 1985. 'Lexicalization patterns: semantic structure in lexical forms'. In T. Shopen (ed.), *Language typology and syntactic description* 3, 57-149. Cambridge: Cambridge University Press.

Arthur Holmer <Arthur.Holmer@ling.lu.se>

Hesitation disfluencies after the clause marker *att* 'that' in Swedish¹

Merle Horne, Johan Frid and Mikael Roll

1 Introduction

1.1 Function words and hesitation disfluencies

One factor making the processing of spontaneous speech a challenge is the fact that speakers do not always produce complete clauses or complete syntactic constituents of other kinds. The fact that speakers sometimes pause in their speech production, e.g. to access a word from their mental lexicon or to plan a relatively complex utterance has made the study of different kinds of speech disfluencies an important topic for linguists, speech technologists and psycholinguists (e.g. Clark & Wasow 1998, Levelt 1989, Heeman 1997, Eklund 1999, Nordling 1998, Shriberg 1994). Thus, a central issue in research on spoken language is the development of methods for identifying relevant processing units in the stream of speech, i.e. what G. Miller referred to as the chunking problem (Miller 1956). Boundaries corresponding to punctuation marks (periods, commas, etc.) do not always have clearly specifiable correlates in spoken language and thus one fundamental problem that has to be solved is: how do different kinds of phonetic, lexical and syntactic form interact in signalling the boundaries of relevant processing units in spoken language?

In the speech technology project our group is involved in, we are investigating function words occurring before hesitation disfluencies. According to Clark and Wasow's 'Commit and Restore' model of speech production (1998), stranded function words signal that the speaker intends to produce a constituent of the kind signalled by the kind of function word produced, e.g. a clause after a stranded conjunction, a prepositional phrase after a preposition, etc. Thus the recognition of stranded function words (conjunctions, preposi-

¹This research has been supported by grant 2001-06309 from the VINNOVA (*Verket för Innovationssystem* 'The Swedish Agency for Innovation Systems') Language Technology Program.