Event coordination in Russian Sign Language classifier predicates

V. Kimmelman, R. Pfau & E.O. Aboh (University of Amsterdam)

In this paper, we argue that some classifier predicates (CLPs) in Russian Sign Language (RSL) involve event coordination, and propose a syntactic analysis for such predicates. CLPs are verbs of movement or location which combine with classifier handshapes referring to the moving object [1]. It has been previously argued that the type of the classifier determines the argument structure of CLPs in American Sign Language (ASL): CLPs with whole-entity classifiers are intransitive unaccusative, body-part CLPs are intransitive unergative [2] or covertly transitive [3], and handling CLPs are transitive [2,3].

We analyzed corpus and elicited data to study different types of CLPs in RSL. We found out that whole-entity CLPs are intransitive unaccusative (1), and most body-part classifiers are transitive (2), which is compatible with previous analyses for ASL [2,3].[1]

(1) PERSON CL$_{WE}$(1)-MOVE   'A man moves.'
(2) I HEAD CL$_{WE}$(S)-MOVE   'I move my head (I nod).'

In contrast, handling CLPs in RSL can be used to describe complex events. (3) can express (i) a case of simple handling: a man moves a stick by hand; (ii) an event where the man is moving because he is holding to a moving stick by hand; finally, (iii) an event where the man moves while holding the stick by hand, so the stick also moves. Moreover, the same classifier can also be used without movement (4), the interpretation being a holding event.

(3) MAN STICK CL$_{HL}$(S)-MOVE   (various translations)
(4) MAN STICK CL$_{HL}$(S)   'A man holds a stick.'

In addition, RSL (similarly to ASL and other sign languages) has a classifier that we call "moving legs" CLP, where the extended index and middle fingers move (referring to moving legs) and the hand also moves (referring to movement of the person). This CLP in RSL is intransitive (5), unlike body-part CLPs. Importantly, it describes a combination of two events: movement of the legs has to be controlled, while movement of the person need not be (6), and it may be even absent, as in (7), where only the fingers move, but not the hand.

(5) I (*LEGS) CL$_{ML}$(V)-MOVE   'I walks.'
(6) [MAN] CL$_{ML}$(V)-FALL   'He falls while wiggling his legs.'
(7) [MAN TREADMILL] CL$_{ML}$(V)   'He walks on a treadmill.'

Previous analyses developed for ASL [2,3] cannot account for these complex cases, since they predict that handling CLPs encode simple transitive events (an Agent moves a Patient), as do body-part CLPs (an Agent moves a body-part Patient). We propose an alternative analysis to account for the complex CLPs in RSL.

In many approaches to verbal syntax and event structure, verbs are analyzed as consisting of multiple events [4]. For instance, Ramchand analyzes the breaking event in 'The man broke a stick' as consisting of the *init* subevent (the man acting), the *proc* subevent (the stick breaking), and the *res* subevent (the stick being in the broken state) [4]. However, in this verbal decomposition, the subevents are causally connected: the *init* subevent causes the *proc* subevent, which in turn causes the *res* subevent.

In the case of complex CLPs in RSL, the subevents are not causally connected. Handling CLPs describe two events: the event of an Agent holding a Theme by hand, and the event of the Theme moving. As discussed, (3) is compatible with interpretations where the first event causes the second (ii) and vice versa (iii). The second subevent can also be omitted (4). We thus conclude that there is no general direction of causality between the two subevents. The "moving legs" CLPs also describe two events: the event of an Agent moving his legs, and the event of a Theme (identical to the Agent in the first event) moving. Although
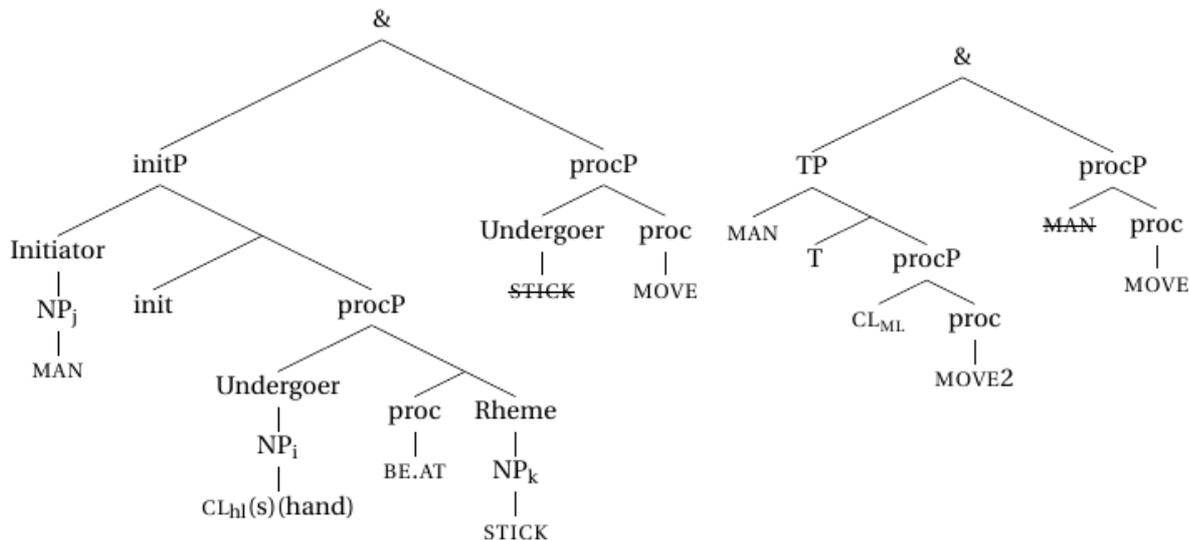
---

[1] Abbreviations: WE – whole-entity, BP – body-part, HL – handling, ML – "moving legs". Between brackets, we refer to the handshape using the standard ASL fingerspelling-based notation (see here). All the videos of the examples can be accessed here. Examples are played first in full speed, and then in 50% speed.

the first subevent often causes the second (5), in (6) and (7) this is not the case. Again, there is no general direction of causality. The event structure of the handling and "the moving legs" CLPs in RSL thus does not fit the causal structure underlying predicates such as *break*.

We conjecture that the relation between the events in these CLPs in RSL is that of coordination. The predicates encode the fact that there are two events, and that they occur simultaneously, but do not encode causality. The meaning of (3) is 'a man holds a stick by hand, and the stick moves', and the meaning of (5) is 'a man moves his legs, and he moves'. Causal relations can be established in pragmatics, but these are not linguistically encoded. We formalize this intuition using Ramchand's event decomposition and coordination in syntax:

(8) Handling CLP (for ex. 3)   (9) "Moving legs" CLP (for ex. 5)

```
                      &
          ┌───────────┴───────────┐
        initP                   procP
     ┌────┴────┐             ┌────┴────┐
  Initiator    │          Undergoer   proc
     │       ┌─┴──┐           │         │
    NP_j    init procP      STICK     MOVE
     │         ┌───┴────┐
    MAN    Undergoer    │
               │      ┌─┴───┐
              NP_i  proc   Rheme
               │     │      │
          CL_hl(s)(hand)  NP_k
                   BE.AT    │
                          STICK
```

```
                   &
          ┌────────┴────────┐
         TP              procP
      ┌───┴───┐        ┌────┴───┐
     MAN      │       MAN      proc
           ┌──┴──┐              │
           T   procP          MOVE
              ┌──┴───┐
           CL_ML    proc
                     │
                   MOVE2
```

The first conjunct in (8) expresses the first event in (3): 'the man is causing his hand to be around the stick' (=holds the stick). The hand is an obligatory part of the meaning, so we analyze it as an incorporated Patient argument, expressed by the S-handshape. The second conjunct is the second event: the stick moves (expressed by MOVE).

The first conjunct in (9) expresses the first event in (5): the man moves his legs. Again, we analyze the legs as an obligatorily incorporated argument, expressed by the V-handshape; the movement of the fingers is the MOVE2 predicate. The second conjunct encodes the second event: the person moves (expressed by MOVE).

In both cases, we observe that the argument in the second conjunct is elided, and that the coordinated predicates on the phonological level fuse into one sign. This fusion is necessary because the predicate MOVE in the second conjunct consists of movement only. A sign with just a movement is not phonologically well-formed, so the movement 'cliticizes' to the other predicate, which either lacks movement (8) or only contains hand-internal movement (9). In contrast, the predicates in the first conjuncts in (8) and (9) are phonologically well-formed, so they can also occur in structures without conjunction (4,7).

Taken together, our analysis indicates that CLPs in RSL do not involve a direct relation between argument structure and classifier type, and some CLPs encode complex events involving event coordination.

References: [1] Zwitserlood, I. 2012. Classifiers. In R. Pfau, M. Steinbach & B. Woll (eds) *Sign language: An international handbook*, 158–186. Mouton de Gruyter **[2]** Benedicto, E. & D. Brentari. 2004. Where did all the arguments go?: Argument-changing properties of classifiers in ASL. *Natural Language & Linguistic Theory 22(*4), 743–810. **[3]** Grose, D., R.B. Wilbur & K. Schalber. 2007. Events and telicity in classifier predicates: A reanalysis of body part classifier predicates in ASL. *Lingua 117*(7), 1258–1284. **[4]** Ramchand, G.C. 2008. *Verb meaning and the lexicon: A first phase syntax*. Cambridge University Press.