Croatian serial verbs compared with subjunctives and infinitives
A formal analysis

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1. Introduction

Croatian (Cr) contains multi-verb constructions of the type exemplified in (1), featuring two imperative verbs which function as a single unit.

(1) a. *Odi   /   Idi   kupi   novine!*
         go2sg.imp.perf   go2sg.imp.imperf.   buy2sg.imp.   newspapers
         'Go buy newspapers!'
     b. *Dođi   vidi   ovu   sliku!*
         come2sg.imp.perf.   see2sg.imp   this   picture
         'Come see this picture.'

Similar constructions can also be found in other Slavic languages such as Russian (2), Balkan languages such as Modern Greek (3), as well as in English (4).

(2) *Idi   uči   uroki!*[1]
     go2sg.imp   study2sg.imp spells
     'Go study spells!'

(3) *Ela   pes   mu!*
     come2sg.imp say.2sg.imp me.gen
     'Come tell me!'

(4) a. *Come see this!*
     b. *Go get me a Coke!*

We argue that Cr constructions such as those in (1) fall within the broader cross-linguistic typology of *Serial Verb Constructions* (SVC). SVCs are typically described as constructions consisting of two (or more) verbs, which together function as a single syntactic, semantic and prosodic unit (Aikhenvald 2006, 2018).

2. Cross-linguistic properties of SVCs

SVCs have been observed in a number of typologically diverse languages, most prominently in the isolating languages of West Africa (such as Igbo [5]) and South-East Asia (such as Tetun Dili [6] and Taba [7]).

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[1] Example provided by Alina Israeli via Seelangs.

(5) *Ó   ti-gbù-rù   nwóké áhù.*   (Igbo; Lord 1975: 28)
    he   beat-kill-past man   that
    'He beat that man to death.'

(6) *Tuda bola   mai.*   (Tetun Dili; Hajek 2006: 243)
    throw ball   come
    'Throw the ball over here.'

(7) *n-babas   welik n-mot   do*   (Taba; Bowden 2001: 297)
    3sg.-bite   pig   3sg.-die   real.
    'It bit the pig dead.'

There is no precise cross-linguistic definition that applies to all SVCs, but SVCs have been shown to exhibit (more or less consistently) a number of properties that distinguish them from other multi-verb constructions across languages. The most widely observed among these properties are listed below (Zwicky 1990, Comrie 1995, Aikhenvald 2018):

> (i) SVCs consist of two (or more) inflected verbs without any syntactic link or marker of dependency between them;
> (ii) each verb contained within an SVC can also function as the sole verb in the clause;
> (iii) SVCs function as a single predicate and thus denote a single event;
> (iv) SVCs occur within a single clause (i.e. mono-clausal structure);
> (v) verbs within an SVC share at least one core argument;
> (vi) SVCs can inflect across tenses and other grammatical categories.

Cr constructions of the type exemplified in (1) will be shown to exhibit the bulk of the properties in (i-vi), thus justifying the use of the SVC label in this language as well.

3. SVCs vs coordinate clauses in Cr:

Firstly, the verbs contained within a Cr SVC can also function as the sole predicate within the clause (in accordance with the SVC criterion in [ii]):

(8) *Odi   kupi   novine.*
    go2sg.imp buy2sg.imp   newspapers
    'Go buy newspapers.'
(9) a. *Odi   van.*
        go2sg.imp. outside
    b. *Kupi   novine.*
        buy2sg.imp newspapers

The SVC-type clause in (8) also seems to satisfy the criterion given in (i), i.e. no syntactic link between verbs within an SVC. Nevertheless, it could be argued that (8) is in fact syntactically equivalent to the coordinate clause (CC) in (10), the only difference being that the coordinator *i* 'and' is silent in the former case and phonetically realized in the latter.

(10) *Odi   i   kupi   novine.*
     go2sg.imp and   buy2sg.imp   newspapers
     'Go and buy newspapers.'

Nevertheless, we show that (8) and (10) constitute different types of clauses (despite their surface similarity): (10) exhibits properties typical of CCs, i.e. bi-clausal structure and bi-eventive interpretation, whereas (8) exhibits the characteristics typical of SVCs, i.e. mono-clausal structure and single event interpretation.

3.1 Open vs closed verb set

Both verbs within Cr CCs have an equal status and are drawn from an unbounded lexical verb set. Each of them functions as the predicate of its clause.

(11) *Odi/*   *požuri/*   *uzmi*   *novce* ***i***   *kupi*   *novine.*
     go2sg.imp   hurry-up2sg.imp   take2sg.imp   money and   buy2sg.imp   newspapers

In the case of Cr SVCs, the first verb is drawn from a bounded and very restricted set involving only verbs of motion. The second verb is drawn from an unbounded set and functions as the lexical head of the construction.

(12) *Odi/*   **požuri/*   ** uzmi*   *novce kupi*   *novine.*
     go2sg.imp   hurry-up2sg.imp   take2sg.imp   money buy2sg.imp   newspapers
     'Go/hurry up/take the money (and) buy newspapers.'

Most SVCs across languages are *asymmetric* in this sense, containing one 'major' component, i.e. a verb drawn from an unrestricted verb set, and one 'minor' component, chosen from a closed subset of verbs (Aikhenvald 2018).

3.2 Single vs double event interpretation

Cr SVCs also correspond to the SVC criterion in (iii), i.e. the verbs contained within a Cr SVC compose a single predicate and denote a single event. One indication of this is the ban on the use of separate temporal markers in Cr SVCs (13a), which is allowed in CCs (13b):

(13) a. * *Odi*   ***sad***   *završi*   *zadaću*   ***poslije***.
            go2sg.imp   now   finish2sg.imp homework   later
     b.   *Odi*   ***sad***   *i*   *završi*   *zadaću*   ***poslije***.
            go2sg.imp   now   and   finish2sg.imp homework   later
            'Go now and finish your homework later.'

3.3 Subject control

Cr SVCs can only feature one (*pro*) subject, appearing either in singular (14a) or in plural (14b); CCs are compatible with two separate subjects (15):

(14) a.   *Odi*   *kupi*   /   ** kupite*   *novine.*
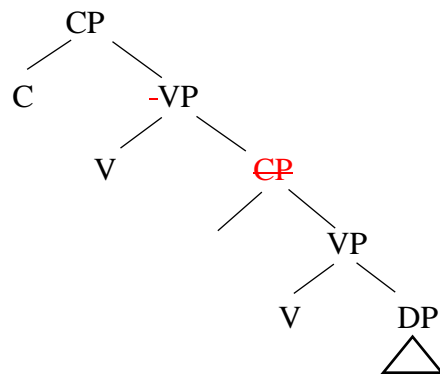   go2sg.imp   buy2sg.imp   buy2pl.imp   newspapers
     b.   *Odite*   *kupite /*   ** kupi*   *novine.*
            go2pl.imp   buy2pl.imp   buy2sg.imp   newspapers

(15) *Odi*   *i*   *kupi*   /   *kupite*   *novine.*
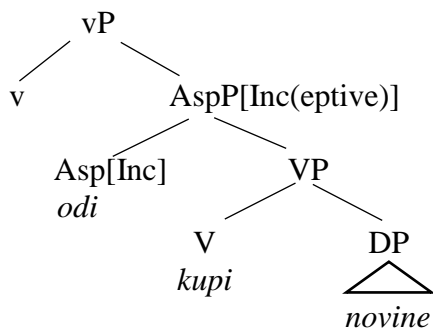   go2sg.imp   and   buy2sg.imp   buy2pl.imp   newspapers

3.4 Clitic climbing

Clitic climbing from the lower to the higher verb (which typically only occurs in mono-clausal environments) is allowed in Cr SVCs (16) and disallowed in CCs (17):

(16) *Odi*   ***mi***   *kupi*   *(mi)*   *novine.*
      go2sg.imp   to-me-cl   buy2sg.imp   to-me-cl   newspapers
                   ⬑_____CLITIC CLIMBING_____⬏

(17) a.   *Odi*   *i*   *kupi*   *mi*   *novine.*
            go2sg.imp   and   buy2sg.imp   to-me-cl.   Newspapers
      b. * *Odi*   ***mi***   *i*   *kupi*   *novine.*
            go2sg.imp   to-me-cl.   and   buy2sg.imp   newspapers

(16-17) thus show us that Cr SVCs, unlike CCs, constitute mono-clausal structures (SVC criterion in [iv]).

4. Parallels between SVCs and other anaphoric clause structures in Cr: Formal analysis

The anaphoric properties observed in Cr SVCs in §3 are largely shared by infinitives (Inf) (18b) and control subjunctives (C-subj) (18c) (the latter being more typical of Serbian).

(18) a.   *Odi*   *kupi*   *novine.*   [SVC]
            go2sg.imp   buy2sg.imp   newspapers
      b.   *Odi*   *kupiti*   *novine.*   [Inf]
            go2sg.imp   buy-inf   newspapers
      c.   *Odi*   *da*   *kupiš*   *novine.*   [C-Subj]
            go2sg.imp   subj.   buy2.sg   newspapers

All of these clauses are compatible with a single subject only (as shown by the use of indices in [19]).

(19) a.   *Odi$_i$*   *kupi$_i$*   *novine.*   [SVC]
            go2sg.imp   buy2sg.imp   newspapers
      b.   *Odi$_i$*   *kupiti$_{i/*j}$*   *novine.*   [Inf]
            go2sg.imp   buy-inf   newspapers
      c.   *Odi$_i$*   *da*   *kupiš$_i$ /*   * *kupite$_j$*   *novine.*   [C-Subj]
            go2sg.imp   subj.   buy2.sg   buy2.pl   newspapers
      d.   *Ivan$_i$ mora$_i$ /*   *počinje$_i$*   *raditi$_{i/*j}$.*   [Inf]
            Ivan   must3sg.   begin3sg.   work-inf.
      e.   *Ivan$_i$ mora$_i$ /*   *počinje$_i$*   *da*   *radi$_i$ /*   * *rade$_j$.*   [C-Subj]
            Ivan   must3sg.   begin3sg.   subj   work3sg.   work3pl.
            'Ivan must/is beginning to work.'

Clauses such as those in (20) are also incompatible with separate spatio-temporal marking:

(20) a. * *Jučer*   *je*   *Ivan*   *morao/počeo raditi*   *sutra.*   [Inf]
            yesterday   is   Ivan   had-to began work-inf   tomorrow
      b. * *Jučer*   *je*   *Ivan*   *morao/počeo da*   *radi*   *sutra.*   [C-SUBJ]
            yesterday   is   Ivan   had-to began subj   work3sg.   tomorrow

c. *	*Jučer*	*odi*	*kupi*	*novine*	*sutra.*	[SVC]
	yesterday	go2sg.imp	buy2sg.imp	newspapers	tomorrow	

These data (among others) show us that Cr Inf and C-subj pattern with SVCs in that they involve a mono-clausal structure and denote a single event. From a formal standpoint, they thus constitute a single CP domain.

(21)   SVC/Cr Inf/C-Subj

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              CP
             /  \
            C    -VP
                /  \
               V   ~~CP~~
                    /  \
                   VP
                  /  \
                 V    DP
                      /\
                     /__\
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(22)   Cr SVC

```
           vP
          /  \
         v    AspP[Inc(eptive)]
             /        \
        Asp[Inc]       VP
          odi         /  \
                     V    DP
                   kupi   /\
                         /__\
                        novine
```

While the second verb, i.e. the lexical head of the SVC, is inserted under the thematic V-head, the first verb (i.e. the verb of motion) is inserted under an aspectual head which we label *Asp-Inceptive*. We use the *inceptive* label because the main function of the first verb within a Cr SVC (in addition to denoting a sense of motion) is to denote temporal proximity/immediacy of the action. In effect, the action expressed by the SVC must be proximate to the utterance time, which also differentiates SVCs (23a-b) from simple imperatives (23c), which are not as proximate with respect to the utterance time:

(23) a. *Odi*   *kupi*   *knjigu*   *odmah.*
          go2.sg.imp   buy2sg.imp   book   immediately
          'Go buy newspapers im   mediately.'
      b. * *Odi*   *kupi*   *knjigu*   *sutra /*   *sljedeći*   *tjedan.*
          go2sg.imp.   buy2sg.imp   book   tomorrow   next   week
          'Go buy newspapers tomorrow/next week.'
                                              vs.
      c. *Kupi*   *knjigu sutra /*   *sljedeći*   *tjedan.*
          buy2sg.imp   book tomorrow   next   week
          'Buy the book tomorrow/next week.

5. Conclusion

Cr SVCs were shown to share the bulk of the properties observed with their cross-linguistic counterparts. Most significantly, they denote a single event from a semantic standpoint and project a mono-clausal structure from a syntactic standpoint. In this sense, they pattern with some other anaphoric control structures found in Cr, i.e. Inf and C-subj. All of these clauses project a single CP structure.

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