Clitic climbing and infinitive clusters in Bosnian, Croatian and Serbian – A corpus-driven study

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CLITIC CLIMBING (henceforth as CC) "refers to constructions in which the clitic is associated with a verb complex in a subordinate clause but is actually pronounced in constructions with a higher predicate (for instance, the matrix verb which selects that subordinate clause), even though it may have no obvious semantic or syntactic connection to that verb" (Spencer & Luís 2012: 162). An example of CC out of infinitive complements is given in the Serbian sentence (1) where the clitic *ga* 'him' is realised in the second position of the matrix clause (Wackernagel position). The movement of the clitic pronoun is possible because there is no syntactic barrier between the matrix and the complement clause.

Clitics as such have been described for Czech by Junghanns (2002), Hana (2007) and Rosen (2014) and as well for Bosnian, Croatian and Serbian (BCS) by Franks & King (2000), Browne (2003, 2004, 2014) and others. These studies have shown that there are big differences between Czech and BCS; e.g. the latter allow phrase splitting and clitic third. It has to be pointed out that there are no empirical descriptions of clitics in BCS based on natural data. The syntactic conditions enabling clitic climbing are thoroughly described only for Czech (Junghanns 2002). Stjepanović (2004) claims that CC is obligatory in BCS but she does not analyse its conditions.

Our point of departure is the observation that all existing studies on clitics in BCS (and in Czech) focus on the structure 'matrix verb + infinitive', however none of them deals with INFINITIVE CLUSTERS, i.e. the coordination of two or more infinitives. Based on these first observations concerning CC in BCS, we elaborate on the claim that CC is obligatory in infinitival complements and address the following research question: "Can CC appear in the context of infinitive clusters, i.e. the stacking or of two or more infinitives?" This boils down to the question if an infinitival form prevents clitics to move to the second position in the matrix clause. An example of infinitive stacking in Croatian is given in (2).

We start our study with data for the two complement taking predicates (later CTP) *morati* 'must' and *pokušati* 'try' representing different predicate types, namely a raising and a subject control construction. We extract the data from three massive, morphosyntactically tagged web corpora: bsWaC v1.2, hrWaC v2.2 and srWaC v1.2.

In our corpus driven study, we test clitics in three positions in CTPs with complements containing infinitive clusters (we allow two to four infinitives in a row):

CTP – stacked infinitives (2,4) – clitic, cf. example (3)
CTP – clitic – stacked infinitives (2,4), cf. example (4)
clitic – CTP – stacked infinitives (2,4), cf. example (5)

In our study, we focus on CC of personal pronouns. Our data from hrWaC 2.2. show that CC out of infinitive clusters is not obligatory. While in the context of a single infinitive complement, the absence of CC (position a) is a rather marginal phenomenon, in the context of infinitive stacking, it is more frequent (compare % in rows "single infinitive" with "infinitive cluster" in Table 1). Apart from that, we see that with infinitive clusters word order (position c) is much less frequent than position b) compared to complements with a single infinitive. In a more thorough analysis of the infinitive clusters, we examine which contexts the absence of CC is restricted to. Moreover, we are going to discuss select cases of split of clitic clusters as illustrated by ex. (6).

Examples

(1)	*Milan*	*ga$_i$*	*mora /*	*želi*	*[vidjeti t$_i$].*
	Milan	him.ACC	must.3PRS /	wants.3PRS	see.INF
(1')	**Milan*	*mora /*	*želi*	*[vidjeti*	*ga].*
	'Milan must / wants to see him.'				Stjepanović (2004: 179f)

(2) *Još*   *malo*   *pa*   *ćemo*   *morati*
     more   little   and   will.1PL   must.INF
     početi   *razvijati* *svemirski* *program.*
     start.INF   develop.INF space   program
     'A little more and we will have to begin to develop a space   (hrWaC v2.2)
     program.'

(3) *Morat*   *ćemo*   *nastojati*   *nauditi*   *im*
     must.INF   will.1PL   try.INF   harm.INF   them.DAT
     s   *kontranapadima.*
     with   counterattacks.INSTR
     'We'll have to try to hurt them with counterattacks.'   (bsWaC v1.2)

(4) *Morate*   *ih*   *samo*   *znati*   *prepoznati.*
     must.2PRS   them.ACC   only   know.INF   recognize.INF
     'You just have to know how to recognize them.'   (srWaC v1.2)

(5) *Ona*   *nas*   *mora*   *naučiti*   *kontrolirati.*
     She   us.ACC   must.3PRS   teach.INF   control.INF
     'She has to learn how to control us. '   (bsWaC v1.2)

(6) (...) *pokušat* *će*   *mu*   *pomoći*   *upisati*
     try.INF   will.3PL   him.DAT   help.INF   enrol.INF
     ga   *i*   *u*   *srednju*   *školu* (...)
     him.ACC   as well   in   middle.ACC   school.ACC
     'They'll help him to enrol him at the secondary school as well. '   (bsWaC v1.2)

Table 1

Positions			single infinitive		infinitive cluster	
			relative frequency[1]	%	relative frequency	%
morati	V / V (2-4)	CL	0.07	0,23%	0.03	10,32%
morati	CL	V / V (2-4)	11.82	39,21%	0.11	38,46%
CL	morati	V / V (2-4)	18.25	60,56%	0.15	51,21%
pokušati	V / V (2-4)	CL	0.72	0,91%	0.02	10,26%
pokušati	CL	V / V (2-4)	27.18	34,61%	0.09	56,41%
CL	pokušati	V / V (2-4)	50.65	64,48%	0.05	33,33%

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[1] relative frequencies = (pattern frequency/matrix lemma frequency)*1000