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The Prosodic Status of A/A'-Heads in Slavic

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1. Introduction

Roberts (1992) proposes that heads can be either A- or A'-heads and hence are subject to relativized minimality (Rizzi 1989). Rivero (1991, 1994a) argues that the A/A' distinction determines which verbal heads in Slavic can raise to C⁰ to support clitics, including clitic auxiliaries, which would otherwise be in initial position. Since C⁰ is an A'-position, a verbal head cannot move to C⁰ over another A'-head to host the clitics, i.e., the highest A'-head must be the one to move to C⁰. This A/A' distinction among functional heads appears to be further supported by the fact that in certain compound tenses either of two participles can raise to C⁰, which would be predicted if the first participle is an A-head and hence can be skipped over by the lower participle. A final phenomenon lending support to this analysis is that only A'-heads allow VP preposing.

In this paper I argue that the relevant distinction among functional heads is not their A/A' status but their prosodic status, an idea which Rivero 1991 mentions but dismisses: Rivero's A-heads are clitics, while the A'-heads are non-clitics. The fact that only clitics can be skipped when a verbal head raises to C⁰ results from the fact that it is the highest non-clitic functional head which raises to host the clitics. The paper is organised as follows. Section 2 introduces the basic Slavic clitic patterns, while section 3 provides the reasoning behind positing A/A' heads in Slavic. The prosodic status of Slavic heads is discussed in section 4, and further evidence for the prosodic distribution is described in section 5.

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2. Syntax of Slavic Clitics

The Slavic languages in question have argument clitics as well as auxiliary clitics. These clitics always form a group, and there is no difference in their behavior whether there are auxiliary clitics, pronominal clitics, or both types present. These clitics appear in a fixed order relative to one another, i.e., not only are the pronominal clitics ordered amongst themselves, but the auxiliary clitics are ordered relative to the argument clitics (see the examples below). That these lexical items are clitics, while their full form counterparts are not, is uncontroversial (see Radanović-Kocić 1988 for detailed discussion of this in SC): the clitics cannot appear without a prosodic host, e.g., they cannot serve as answers to questions or appear sentence initially; they form a phonological word with their host, which can result in their undergoing phonological assimilation processes; they cannot be conjoined or appear as the objects of prepositions, i.e., they have special syntactic status in addition to their restricted clausal distribution discussed below; they cannot be focused or contrasted, i.e., they cannot bear stress (but see Hauge 1976 on the special properties of the BL negative marker); etc.

In SC, CZ, and SL, the clitics are second position clitics in a C⁰ oriented position. However, in BL the clitics appear adjacent to the verb in an I⁰ oriented position (for discussion of the contrast between I⁰ and C⁰ clitics see Halpern and Fontana (1993), Renzi (1989), and Rivero (1994b)). BL allows multiple maximal projections to precede the clitics, as in (1), while CZ, SL and SC do not, as in (2).² (Clitics are indicated by italics.)

- (1) a. [Vasko] [veče] *i* *go* kaza.
Vasko already her it told-3SG
'Vasko already told it to her.' (BL) (Ewen 1979:19)
- b. [Včera] [v gradinata] [Daniela] *mu* *gi* dade.
yesterday in garden.the Daniela him them gave-3SG
'Yesterday in the garden Daniela gave them to him.' (BL)
- (2) a. *[Dnes] [jistě] *by* *ti* *je* prodali levněji.
today certainly would-3PL you them sold cheaper
'They would sell them to you cheaper today.' (CZ)
(cf. Dnes *by ti je jistě* prodali levněji.)
- b. *[Sutra] [deca] *ga* *neće* videti.
tomorrow children him will-not see
'The children will not see him tomorrow.' (SC)
(cf. Sutra *ga deca neće* videti.)

This difference can also be seen by the fact that when the clause contains a simple,

²Left-dislocated constituents do not count for clitic placement since they are not within the clause, i.e., CP is the domain of clitic placement (see Čavar and Wilder (1994) on SC).

non-clitic finite verb and argument clitics, the clitics can be separated from the verb in CZ, SL, and SC, as in (3), but not in BL, as in (4).

- (3) a. Anina *im* [sestra] nudi čokoladu.
Anina them sister offer-3SG chocolate
'Ana's sister is offering them chocolate.' (SC) (Progovac 1996:414)
- b. Tohle staré kolo *se ti* [jednou] rozpadne.
this old bicycle itself you once fall-apart-3SG
'This old bicycle will fall apart on you one day.' (CZ)
(Toman 1986:124)
- (4) a. *Az *mu* [knigata] dadox.
I him book.the gave
'I gave him the book.' (BL)
(cf. Az knigata *mu* dadox.)
- b. *Vasko *i go* [veče] kaza.
Vasko her it already told-3SG
'Vasko already told it to her.' (BL)
(cf. Vasko *veče i go* kaza.)

In addition, in subordinate clauses introduced by an overt complementizer, the complementizer will host the clitics in CZ, SL and SC, as in (5). However, in BL the clitics can be nonadjacent to the complementizer as long as they are adjacent to the verb, as in (6).

- (5) a. ... da *me je* Ivan vidio.
that me aux-3SG Ivan see
'... that Ivan saw me.' (SC) (Dimitrova-Vulchanova 1993:27)
- b. *... da Ivan *me je* vidio. (SC) (Dimitrova-Vulchanova 1993:27)
- (6) a. Toj kaza, *če knigata sŭm mu ja* bil dal.
he said that book.the aux-1SG him it have give
'He said that I had given him the book.' (BL)
(Dimitrova-Vulchanova 1993:4)
- b. Toj kaza, *če sŭm mu ja* bil dal knigata. (BL)
- c. *Toj kaza, *če sŭm mu ja* knigata bil dal. (BL)

Finally, in CZ, SL, and SC, the clitics can appear non-adjacent to the verb and after the first of multiply fronted wh-phrases, as in (7) (Browne 1976; Toman 1981; Rudin 1988). In contrast, in BL the clitics are adjacent to the verb, following all the wh-phrases, as in (8).

- (7) a. Ko *mu je šta dao?*
 who him aux-3SG what gave
 'Who gave him what?' (SC) (Rudin 1988:462)
- b. Kdo *ho kde viděl je nejasné.*
 who him where saw is unclear
 'It is unclear who saw him where.' (CZ) (Toman 1981:298)
- (8) Koj *kakvo ti e kazal?*
 who what you aux-3SG told
 'Who told you what?' (BL) (Rudin 1988:461)

The above data concerning clitic placement show that BL clitics always cluster around the verb or the verbal participle if the finite auxiliary is a clitic. In contrast, the clitics in SC, CZ, and SL are always in second position, regardless of the position of the verb. What is important for the discussion here is: that the auxiliary and pronominal clitics pattern together and that despite the difference in placement of the clitic cluster in BL, the Slavic languages in question behave identically with respect to their proposed A/A' behavior, as will be seen below.

3. A/A' Heads in Slavic

The above clitics are prosodically enclitic, i.e., they must have a host to their left. In some cases, this host is a maximal projection, as in (6a), or complementizer in a higher projection, as in (6b). However, even when the clitics are syntactically initial in their clause, they still need a host. This section discusses a proposal put forth by Lema and Rivero (1989) and Rivero (1991) in which a verbal head in a projection below I^0 can raise to C^0 to host the clitics; this is referred to as Long Head Movement and is constrained by relativized minimality via the A/A' status of the verbal heads. This movement is assumed to be to C^0 because the raised verb is always in initial position and this movement is blocked in subordinate clauses.

3.1. Simple Cases

When there is a simple (non-clitic) finite verb, it hosts the pronominal clitics, as in (9). This is standard short head movement: the verb moves first to I^0 and then to C^0 . For example, in (9a) the verb *dade* raises via I^0 to host the pronominal clitics *mi* and *ga* in their C^0 oriented position.

- (9) a. Dade *mi ga Nena.*
 gave-3SG me it Nena
 'Nena gave it to me.' (SC) (Tomić 1994:4)

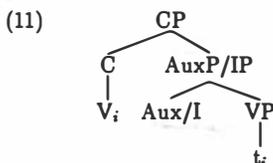
- b. Dadox *mu go*.
 give-1SG him it
 'I gave it to him.' (BL)

When there is a non-clitic auxiliary, it hosts the pronominal clitics, as in (10). This too is standard short head movement: the auxiliary in I⁰ moves to C⁰. For example, in (10b) the non-clitic auxiliary *beše* raises to host the clitics *mu* and *go* which follow it but precede the participial verb *dala*.

- (10) a. Budeme *tě* potrebovat.
 aux-1PL you need
 'We will need you.' (CZ)
- b. Beše *mu go* dala.
 aux-3SG him it gave
 'She gave it to him.' (BL) (Hauge 1976:39)

3.2. V⁰ Raising

The question then arises as to what happens if the auxiliary is itself a clitic. According to the above paradigm the auxiliary would be expected to be the host. However, it is unable to provide a host for itself and any other clitics. Rivero (1991) and Lema and Rivero (1989) argue that a process called Long Head Movement (LHM) occurs in configurations like (11) in which V⁰ raises to C⁰, skipping the finite auxiliary.



They claim that in the Slavic languages, LHM is motivated by the need for the clitics to have a host, as in the examples in (12). For example, in (12a) the auxiliary *sŭm* is a clitic and needs a host; as such the participle *pročel* raises to host it. In (12d) there are two clitics, the auxiliary *som* and the conditional marker *by*. The first non-clitic verbal form, the auxiliary *bol*, raises to host the clitics, while the participle *napísal* remains in the VP.

- (12) a. Pročel *sŭm* knigata.
 read aux-1SG book
 'I have read the book.' (BL) (Lema and Rivero 1989:334)
- b. Koupil *jsem* knihy.
 bought aux-1SG books
 'I bought books.' (CZ) (Rivero 1991:339)

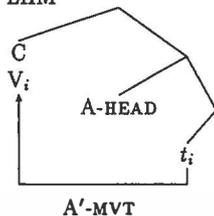
- c. Predstavio *sam mu se.*
introduced aux-1SG him self
'I have introduced myself to him.' (SC)
- d. Bol *by som napisal list.*
have cond aux-1SG written letter
'I would have written the letter.' (SL) (Rivero 1991:341)

3.3. The A/A'-head Distinction

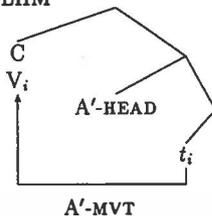
LHM violates the Head Movement Constraint in that movement of V^0 to C^0 skips an intervening head (Travis 1984; Baker 1988; Chomsky 1986). Lema and Rivero (1989) and Rivero (1991, 1994a) propose that LHM is permissible in these contexts because head movement is subject to the ECP, not the Head Movement Constraint. In order to conform to the ECP, the trace in (11) must be properly governed. Based on a proposal by Roberts (1992), Rivero (1991, 1994a) argues that this head movement is subject to relativized minimality (Rizzi 1989; Roberts 1992).

In the case of LHM, relativized minimality works as follows: It is assumed that heads are either in A or A' positions (Koopman 1984). LHM is a type of A' movement since C^0 is an A'-head position (see Roberts 1992 on the distribution of A- and A'-heads). As required by the ECP, the trace left by the verb must be properly governed. Under relativized minimality, the first A'-head above the trace will properly govern it. If the moved verb in C^0 is the closest A'-head to the trace, then it properly governs its trace and the structure is licit. However, if there is another A' head between the verb in C^0 and its trace, e.g., Neg^0 , then that A'-head will be a closer potential governor for the trace and as a result the verb in C^0 cannot properly govern its trace and the structure is ungrammatical, as in (13b). Only A'-heads count as potential governors for the trace, and hence the verb can skip infinitely many A-heads, e.g., certain auxiliaries, and still properly govern its trace. This is what happens when LHM occurs. The verb has skipped one or more A-heads as it moves to C^0 , but as long as it does not pass any A'-heads, it can still properly govern its trace, as in (13a).

(13) a. ✓ LHM



b. * LHM



4. The Prosodic Status of Heads

In Slavic there is a suspicious correlation between heads which are transparent

to LHM, i.e., A-heads, and heads which are clitics. Basically, a head can be skipped if it is a clitic, but not if it is not a clitic and hence can host clitics. This suggests that the division in question is prosodic, not syntactic (see Embick and Izvorski (1994) for a similar conclusion). In fact, it is always the highest non-clitic verbal head which hosts the clitics.³

4.1. SC Clitic vs. Full Auxiliaries

Under the LHM account, when there are argument clitics present and a non-clitic auxiliary, it is unclear whether the auxiliary or the participle should raise to host the clitics. With some auxiliary forms, this led to the positing of A' head status, e.g., with the future auxiliary in CZ, as in (14a), and with the future modal in BL, as in (14b). That is, if these non-clitic auxiliaries and modals are A' heads, and if the participle were to raise over the auxiliary to C⁰ to host the clitics, then the trace left by the participle will be bound by the auxiliary which is a closer A' binder and the structure would be illicit, as desired. So, in these cases, short head movement from I⁰ to C⁰ occurs to host the clitics. Note that this short head movement might be expected due to general minimality constraints whereby the highest eligible head raises.

- (14) a. Budeme *tě* potřebovat.
 aux-1PL you need
 'We will need you.' (CZ)
- b. Šte *sům* přečel knigata.
 fut aux-1SG read book
 'I will have read the book.' (BL) (Rivero 1991:342)

That the relevant distinction is one between clitic vs. non-clitic auxiliaries can be seen most clearly in SC. SC has clitic and non-clitic forms of the same auxiliary (Browne 1974, 1993). Since these auxiliaries are identical other than prosodic sta-

³Another piece of evidence is found in BL and SC in which the clitic auxiliaries *e* and *je* respectively can occasionally be stressed (Hauge 1976; Radanović-Kocić 1988). When they bear stress, they can appear in initial position and do not trigger LHM. In (i) the auxiliary is stressed and hence not a clitic. As such it can appear in clause initial position and can host the question clitic *li*.

- i.a. E li dejanieto na Kostova prestüplenie i ako e kakvo?
 is Q deed.the of Kostava crime and if is what
 'Is Kostava's act a crime and if it is, what crime is it?' (BL) (Hauge 1976:2)
- i.b. Je li on došao?
 aux-3SG Q he come
 'Has he come?' (SC) (Radanović-Kocić 1988:46)

The auxiliaries in (i) are identical to their clitic counterparts except that they are exceptionally stressed. Since they are stressed, they themselves can host the interrogative clitic *li* and no movement of another constituent, either a maximal projection or a verb, is necessary.

tus, they will appear in the same functional head and have the same A/A' status.⁴ However, contrary to the prediction of the A/A'-head analysis, the clitic auxiliary behaves like an A-head and the non-clitic like an A' head. Dimitrova-Vulchanova (1993) and Wilder and Čavar (1994) point out that the participle can only occur in initial position with a clitic auxiliary, not with a non-clitic auxiliary, as in (15).

- (15) a. Čitao *sam* knjigu.
 read aux-1SG book
 'I have read the book.' (SC) (Wilder and Čavar 1994:23)
- b. *Čitao *jesam* knjigu.
 read aux-1SG book
 'I have read the book.' (SC) (Wilder and Čavar 1994:22)
- c. *Jesam čitao* knjigu. (SC)

It could be argued that (15b) is ungrammatical because there is no motivation for LHM: there is no clitic in the clause.⁵ The question is then what happens when there are pronominal clitics present since, like auxiliary clitics, these clitics also trigger verb movement when they need a host. In all dialects of SC the non-clitic auxiliary can host the clitics, as in (16). As such, LHM must minimally be optional in these cases in order to allow short head movement of the auxiliary.

- (16) *Jesam mu* predstavio Mariju.
 aux-1SG him introduce Maria
 'I introduced Maria to him.' (SC)

In most dialects, moving the participle over the auxiliary to host the clitics is ungrammatical or significantly degraded, as in (17).⁶

- (17) */??Predstavio *mu jesam* Mariju.
 introduce him aux-1SG Maria
 'I introduced Maria to him.' (SC)

Since *jesam* does not allow LHM of the participle *predstavio* to host the clitic *mu*, it would seem to be an A'-head. However, its clitic counterpart *sam* allows LHM and

⁴Ž. Bošković (p.c.) suggests that the emphatic reading which the full auxiliary *jesam* lends to declarative clauses may result in its moving to Σ^0 (Laka 1990) which is an A' position, while the clitic form *sam* would not undergo this movement.

⁵When the entire VP is fronted the participle can appear before the non-clitic auxiliary, as seen below. In fact, VP preposing is only possible with non-clitic auxiliaries since the preposed VP is not an appropriate host for clitics in most dialects (section 4.3).

⁶One of my informants found these constructions to be only mildly degraded. However, the same informant allowed optional participle raising of the participle over the auxiliary when no clitics were present. In addition, Ž. Bošković (p.c.) points out that (17) improves if *jesam* is clause final; this is to be expected since the structure could then be interpreted as VP preposing.

hence would seem to be an A-head, as in (15a). Since these are the same auxiliary with the same function originating in the same syntactic position, there seems to be no motivation for such a difference in A/A' status. If, on the other hand, the relevant distinction is one of clitics vs. full forms, which is intuitively relevant for the hosting of clitics, then the difference in behavior is explained in that the highest non-clitic verbal head will host the clitics, as in (18).

- (18) a. [C čitao; [sam [t_i [knjigu]]]]
 b. [C jesam; [mu [t_i [predstavio [Mariju]]]]]

4.2. Cross-linguistic A/A' Status

Another illustration of the problems with positing A/A' status instead of prosodic status as the source for clitic hosts is provided by contrasting modals in CZ, SL and BL. BL forms the future with the morphologically invariable marker *šte*, as in (19). Rivero (1991) analyzes *šte* as heading MP and blocking LHM, i.e., BL *šte* is an A'-head.⁷

- (19) a. Šte *sŭm* pročel knjigata.
 fut aux-1SG read book
 'I will have read the book.' (BL) (Rivero 1991:342)
 b. *Pročel šte *sŭm* knjigata. (BL) (Rivero 1991:342)
 c. *Pročel *sŭm* šte knjigata. (BL)

SL has a non-inflected form for the conditional, *by*, which is not a barrier to LHM, as in (20). That is, *by* would appear to be an A-head.

- (20) Bol *by som* napisal list.
 have cond aux-1SG write letter
 'I would have written the letter.' (SL) (Rivero 1991:341)

CZ, on the other hand, has an inflected auxiliary for the conditional which does not block LHM, as in (21). So, CZ *bych* would appear to also be an A-head.

- (21) Byl *bych* koupil knihy.
 have would-1SG buy books
 'I would have bought books.' (CZ) (Rivero 1991:341)

Since all of these examples involve modals, it would seem that they would exhibit similar behavior. If they did exhibit different behavior relative to their A/A' status, it would be expected that the inflected modal in CZ would be the one to pattern differently since it is the only form which shows agreement features which

⁷(19b) is cited as ungrammatical by Rivero (1991), but speakers which allow optional participle movement over *šte* allow it. All speakers seem to find (19c) to be ungrammatical.

might reflect a different function and hence A status.

However, this is not the case. Rivero points out that abstracting away from *by*, SL demonstrates the same locality conditions as CZ. The question is then why SL *by* can be skipped. Rivero (1991) rejects the idea of arbitrarily positing SL *by* to be an A-head, while BL *šte* is an A'-head. Instead, she suggests that this difference is because SL *by* is not a functional head, but rather is in SpecTP; as such, it is not relevant for relativized minimality and will not interfere with LHM. However, in BL LHM is independently unnecessary when *šte* is present since *šte* can satisfy the enclitics, as in (22a) (Hauge 1976). In contrast, in both the SL and the CZ sentences above, a host is needed for the clitics, including the modal marker, as in (22b/c). In each case, it is the highest non-clitic functional head which hosts the clitics: *bol* in SL and *byl* in CZ. The fact that in SL this movement involves skipping two functional heads, while in CZ it involves skipping only one, is a fact about the clitic inventories of the two languages; there is no reason to assume that *by* in SL is not a head like the other verbal clitics.⁸

- (22) a. BL: [_C [_M *šte* [*sŭm* [*pročel* [*knigata*]]]]]
 b. SL: [_C *bol*; [*by som* [*t*_i [*napísal* [*list*]]]]]
 c. CZ: [_C *byl*; [*bych* [*t*_i [*koupil* [*knihy*]]]]]

4.3. VP Preposing

Lema and Rivero (1989) point out an interesting distinction when dealing with A- and A'-heads. A-heads, the ones which allow LHM movement, do not allow VP preposing. In contrast, A'-heads, which block LHM, allow VP preposing, at least in certain languages. This is because A'-heads are assumed to have lexical content and hence are possible governors for the trace of the VP.

At first, this would seem to provide additional justification for the A/A' distinction between the functional heads. However, Tomić (1994) proposes for SC that the requirement for VP preposing is based on whether or not the verbal head in question is a clitic. Tomić cites a telling minimal pair from SC. SC has two forms of the some auxiliaries: clitic and non-clitic (section 4.1). Presumably, the clitic status of the auxiliary should not have any affect on whether it is an A- or an A'-head. However, the clitic auxiliary does not allow VP preposing, while the non-clitic form does, as in the minimal pairs in (23) and (24).

- (23) a. *[*Kupio knjigu sam.*
 buy book aux-1SG
 'Buy the book I did.' (SC) (Tomić 1994:40)

⁸See Wilder and Čavar 1994 on how these movements occur without violating the HMC. They argue that LHM does occur in that V⁰ moves to C⁰, skipping I⁰, but that the auxiliary in I⁰ is adjoined to C⁰, contra Rivero's analysis. They argue that it is the movement of the clitic auxiliary to C⁰ which licenses LHM, not a difference in A/A' status of the heads.

- b. [Kupio knjigu] jesam.
buy book aux-1SG
'Buy the book I did.' (SC) (Tomić 1994:40)
- (24) a. *[Kupiti knjigu] ću.
buy book aux-1SG
'Buy the book I will.' (SC) (Tomić 1994:41)
- b. [Kupiti knjigu] hoću.
buy book aux-1SG
'Buy the book I will.' (SC) (Tomić 1994:41)

So, in (23a) VP preposing of *kupio knjigu* is blocked over the clitic auxiliary *sam*. However, in (23b) the same VP can be preposed over the non-clitic equivalent of *sam*, *jesam*, and the result is grammatical. (24) shows a similar example with the auxiliary *ću/hoću*. The data in (23) and (24) further illustrate that the difference is not between auxiliaries which take participial complements, as in (23), and those which take infinitival complements, as in (24).

The data concerning VP preposing are very subtle and judgments vary widely from speaker to speaker as to whether they allow it at all. However, speakers who allow VP preposing do not allow it with clitic auxiliaries since the preposed VP generally cannot host clitics.⁹ As mentioned in Lema and Rivero 1989 not all languages allow VP preposing, e.g., BL. This suggests that in addition to the prosodic requirement on VP preposing, there is also a syntactic requirement which certain languages do not meet.

5. Optional Participle Movement

The final evidence cited in support of the A/A'-head analysis of Slavic functional heads involves raising a head other than the highest to support the clitics, as in (25) in which *četjal* raises over the participial auxiliary *bil* to support the auxiliary clitic *s'ŕm*. The idea is that LHM can skip an A-head, such as *bil* without violating relativized minimality.

⁹This restriction is similar to one in English where the clitic form of the auxiliary 's cannot occur when it is followed by a trace, as in (i). The explanation for this requirement remains under debate (see Sag and Fodor 1995 and references therein).

- i.a. *I wonder where; the party's *t*; tonight.
i.b. *The drinks are ready, but I don't think the food's.

- (25) Četjal *sŭm* bil knjigata.
 read aux-1SG have book.the
 '(According to someone) I am reading the book.' (BL)
 (Lema and Rivero 1989:339)
 (cf. bil *sŭm* četjal knjigata.)

However, I argue that the situation in which a non-clitic functional head other than the highest one raises is the result of an independent phenomenon termed optional participle movement (Embick and Izvorski 1994) in which certain auxiliaries allow a participle to raise over them, regardless of whether other clitics are present. Optional participle movement results in a participle adjoining to a higher functional head (the exact landing site of this movement is under debate). If optional participle movement occurs prior to movement to C^0 to support the clitics, then it is what was originally the lower participle which moves to C^0 . Since this first step is optional, if optional participle movement does not occur, the participial auxiliary will be the highest non-clitic functional head and it will move to C^0 .

Following Embick and Izvorski (1994) and Bošković (1995), I assume that this optional participle raising is not LHM in that it does not involve movement to C^0 and is not triggered by the need for the clitics to have a host.¹⁰ They cite evidence from the optionality of the construction, the fact that it would be non-local, and its occurrence in embedded clauses, as discussed below. In this construction the participle can independently raise and is not triggered by the clitics' need for a host, i.e., the participle can appear before the non-clitic auxiliary even when there are no clitics present, as in (26), or the clitics are hosted by an XP, as in (27); note that both orders are grammatical with optional participle movement.

- (26) a. Beše izpil birata.
 aux drink beer.the
 'He had drunk the beer.' (BL) (Embick and Izvorski 1994:3)
 b. Izpil beše birata. (BL) (Embick and Izvorski 1994:3)
- (27) a. Vas dvoje *ste* bili čakali Marijinu prijateljicu.
 you two aux-2PL aux waited Marija's friend
 'You two had been waiting for Marija's friend.' (SC)
 (Bošković 1995:256)
 b. Vas dvoje *ste* čakali bili Marijinu prijateljicu. (SC)
 (Bošković 1995:258)

In addition, optional participle movement can occur in embedded clauses, as in (28), unlike the movement of verbal elements to host clitics which does not occur in sub-

¹⁰Speakers vary as to the extent to which they accept these constructions; optional participle raising seems to be widespread in BL, but subject to more speaker variation in SC.

ordinate clauses.

- (28) a. Rasbrax će beše pročel knjigata.
understood that aux read book.the
'I understood that you had read the book.' (BL)
(Embick and Izvorski 1994:5)
- b. Rasbrax će pročel beše pročel knjigata. (BL)

This ties in with the discussion of A/A'-heads in the following way. Many of the Slavic languages have complex tenses that are composed of more than one auxiliary with a nonfinite (participial) form. If one of these auxiliaries is one which participates in the optional participle raising construction, any clitics, including a clitic auxiliary, will appear after the first verbal form.¹¹ The two possibilities for underlyingly clitic initial structures are shown in (29). If optional participle movement does not occur, either because the auxiliary does not allow it or because the option is not taken, then the auxiliary will host the clitics, as in (29a). If it does occur, then the participle will be the highest non-clitic verbal head and will host the clitics, as in (29b).

- (29) a. No OPM: CL AUX PART → AUX CL PART
b. OPM: CL AUX PART → CL PART AUX → PART CL AUX

In (30a) and (31a) the clitics appear after the participial auxiliary. In (30b) and (31b) optional participle raising has occurred and the clitics appear after the verbal participle.

- (30) a. Bil sŭm četjal knjigata.
have aux-1SG read book.the
'(According to someone) I am reading the book.' (BL)
(Lema and Rivero 1989:339)
- b. Četjal sŭm bil knjigata. (BL)
- (31) a. Bili ste čekali Marijinu prijateljicu.
have aux-2PL wait Marija's friend
'You have been waiting for Marija's friend. (SC) (Bošković 1995:256)
- b. Čekali ste bili Marijinu prijateljicu. (SC)

So, the fact that certain heads can skip others in order to host clitics is in fact independent of the clitics since these particular auxiliaries allow this movement when there are no clitics present. As such, it can be maintained that the highest non-clitic head is the one which hosts the clitics regardless of the heads' A/A' status. If optional participle movement occurs, then the highest non-clitic head may be the

¹¹For languages like BL which have I⁰ oriented clitics, it is possible that the optional participle movement adjoins the participle to a head which is above the clitics. As such, the intermediate step in (29b) may not be necessary in BL.

main verb participle and not a non-clitic auxiliary.

6. Conclusion

Thus, the behavior of functional heads in Slavic with respect to raising to C^0 , VP preposing, and optional participle movement can be explained by their prosodic status. What were claimed to be A heads are in fact clitics, while A'-heads are non-clitics. The prosodic account covers a broader spectrum of the data, while placing differences in the lexicon, i.e., in prosodic status, not in arbitrary A/A' distinctions for syntactically identical heads.

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