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'Second position' revisited: a uniformly syntactic account of 'split' predicates

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Daniela Čulinović

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ABSTRACT OF THE DISSERTATION

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by

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The thesis addresses the placement of 'second position' clitics in a linear order in preposed predicates in Croatian. In particular, I propose a uniformly syntactic analysis of the 'second position' effect in Croatian by analyzing the discontinuous AP predicates in root clauses and neutral discourse from Diesing and Zec [1]. The motivation for the syntactic analysis of second position becomes inevitable with the evidence of novel data with the raising to subject construction presented in Chapter 3. The raising data with split and unsplit AP predicates forces the analysis where AP predicates are 'split' earlier than post-Spell-Out (namely, in the syntactic component). This new evidence shows that AP predicates are not motivated by prosodically conditioned lowering of a clitic into the predicate in a post-syntactic component of the grammar, as most recently assumed by Diesing and Zec [1]. In Chapter 3, I motivate the mechanisms that are involved in predicate 'splitting': complex predicate formation and predicate inversion (Moro 1997). The former evacuates the head of the AP to spec BeP. This creates a remnant AP constituent which undergoes predicate inversion to spec TP (a la Moro [2]). Second, the raising data force us to conclude that AP predicates prepose to spec TP position, in the same way as canonical DP subjects do. This result is consistent with the analysis of predicate initial copular constructions in Moro [2]. In Chapter 2, I show that the 'second position effect', more generally, involves movement of the closest XP to a specifier of a root node in a root clause, around a clitic complex. The clitics in the citic complex are a sequence of separate head constituents situated in a region of the clause higher than spec TP

from where they do not move further. The analysis of the clitic complex in a stable region of a clause has been proposed in Romance Kayne [3], and the analysis where movement via attract closest occurs to the '1st position' in the root clause has been inspired by the root phenomenon in continental Germanic.

The dissertation of Daniela Čulinović is approved.

Roumyana Pancheva

Anoop Mahajan

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To all those who, instead of accepting the life someone already decided for them, acted on their instinct to jump into the unknown; to re-invent themselves, in their own way, and to the best of their ability.

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CHAPTER 1

Introduction

1.1   What the thesis is about

The thesis addresses the position of clitics in Croatian. A specific focus is on a finite enclitic copula *je* and its position with respect to preposed adjectival predicates (APs) in a discourse neutral predicate-subject order, in a root and a non-root clause. The data which the thesis analyses is based on the experimental and corpus data of Diesing and Zec [1] and Diesing and Zec [4].

The position of the enclitic in the root clause as below illustrates the, so called, **Wackernagel** or **second position**, which is a traditional description of a distribution of clitic elements in Croatian. The 'second position' is descriptively characterized as either a position following the 'first phrase' of a sentence as shown in (1-a) or the 'first word' of the sentence, as show in (1-b) in a root clause. As can be seen from the linear order with modified predicates, the 'first word' placement involves surface constituent splitting. This is illustrated in (1-b). Under a standard assumption that *vrlo*'very' originates in the adjectival phrase, the datum is surprising because the clitic appears to occur 'inside' the AP, separating the degree modifier from the adjective. I refer to the 'first word' placement in modified APs as 'split' predicates and the 'first phrase' placement with the modified APs as the 'unsplit' predicates.

(1)   a.   Vrlo zanimljiv **je**   ovaj članak.
             very interesting be.PRS.3SG this article
             'This article is very interesting.'   ('first phrase', unsplit predicates)

       b.   Vrlo **je**   zanimljiv   ovaj članak.
             very be.PRS.3SG interesting this article
             'This article is very interesting.'   ('first word', split predicates)

  c. Zanimljiv **je**   ovaj članak.
    interesting be.PRS.3SG this article
    'This article is interesting.'

Non-root clauses differ from root clauses in having the clitic immediately follow the comple-
mentizer, as shown in (2).

(2) a. da **je** vrlo zanimljiv ovaj članak.
     that be very interesting this article
     '...that this article is very interesting.'

   b. da **je** zanimljiv ovaj članak.
     that be interesting this article
     '..that this article is interesting.'

'Splitting' is also possible in the non-root clause. However, it gives rise to a focus order. I
show the data in chapter 3, but do not discuss it in a great analytical detail in this thesis.

 The **second position placement**, as illustrated in (1) and (2) has been one of the
most hotly debated topics in Slavic literature on phonology-syntax interface ever since the
1970's (Browne [5], Franks and Progovac [6], Progovac [7], Bošković [8], Schütze [9]), and,
empirically, the phenomenon was most commonly studied in the context of *arguments*.

 It was not until Diesing and Zec [1] that the clitic position in the context of *predicates*
has been given closer attention and that interpretetive differences between initial arguments
and initial predicates were put to light. So far, no comprehensive syntactic analysis has been
attempted for the second position phenomenon in the context of predicates, which is where
the current thesis makes a theoretical contribution.

1.1.1 Predicate subject orders and Diesing&Zec data

In this section I point out why Diesing&Zec's data are of great relevance for the new devel-
opments in the research of clitics in Croatian.

 First of all, Diesing&Zec make methodological advances in the study of the phenomenon
by using corpus search and experimental design (acceptability judgment task). This makes

them among the first in the field to have used experimental methods (and dialectally homogenous large sample data) in the study of second position placement[1].

Additionally, Diesing and Zec [1] bring to attention the position of clitics in and around *predicates* and they also control for the **discourse effects** in the position of clitics with respect to arguments and predicates.

Diesing&Zec's experimental work has been based on a generalization about clitic placement in arguments and predicates first noted by Browne [5]. Browne observed that predicate-initial sentences and argument-initial sentences differ with respect to clitic placement in Croatian. While he reported that placing the clitic complex after the first phrase with predicates is not preferred, Diesing and Zec [1] find (3-b) fully acceptable, and I agree with their finding[2].

(3)   a.   Jako **mi je** dosadna njegova posljednja knjiga.
               very me be boring   his   last   book
               'His last book is very boring to me.'   ('first word')

        b.   Jako dosadna **mi je** njegova posljednja knjiga.
               very boring   me be his   last   book
               intended: 'His last book is very boring to me.'   ('first phrase')

The two possibilities for clitic placement in (3), as shown by Diesing and Zec [1], do not differ in their interpretive properties; both (3-a) and (3-b) are fine as neutral orders.

Browne [5] further showed that arguments also allow either the 'first word' or the 'first phrase'. Crucially, Diesing and Zec [1] point out that there is a difference between (4-a) and (4-b): (4-a) is a preferred discourse neutral option, whereas (4-b), where the demonstrative is followed by the clitic, must be contrastively focused. Apart from the data reported in Diesing and Zec [1], I wish to stress out that the 'first phrase' placement with arguments is

---

[1]Diesing&Zec report judgments from native speakers of Serbian from the Belgrade area.

[2]In their earlier study (Diesing and Zec [4], Diesing&Zec report preference for the placement of a clitic complex after the '1st word', consistent with Browne's observation. In Diesing and Zec [1] they report that placement following the 1st phrase with predicates is fine both as a discourse marked order and as a discourse neutral order.

also available as a discourse marked option, as shown in (4-c).

(4) a. Ovaj članak **je**   vrlo zanimljiv.
         this article be.PRS.3SG very interesting
         'This article is very interesting.'   (1st phrase)

     b. OVAJ **je**   članak vrlo zanimljiv.
         this   be.PRS.3SG article very interesting
         'THIS article is very interesting (and not that one).'   (1st word)

     c. OVAJ članak **je**   vrlo zanimljiv.
         this   article be.PRS.3SG very interesting
         'THIS article is very interesting.'

Although not immediately relevant for this thesis, focus orders with predicates are not excluded. For instance, focused and preposed predicates allow the clitic placement either following the 'first phrase' or the 'first word', as shown in (5), (based on Diesing and Zec [1]).

(5) a. Vrlo ZANIMLJIV **je**   ovaj članak.
         very interesting   be.PRS.3SG this article
         'This article is very INTERESTING.'   (focus with '1st phrase' placement with predicates).

     b. VRLO **je**   zanimljiv   ovaj članak.
         very   be.PRS.3SG interesting this article
         'This article is VERY interesting.'   (focus with the '1st word' placement with predicates)

Thus, arguments and predicates show an interesting distinction in clitic placement, summarized in Table 1.1 and 1.2 (from Diesing and Zec [1, p.7]:

	1st word	1st phrase
Argument	*	preferred
Predicate	preferred	OK

Table 1.1: Preference for copula placement in a **neutral** order

	1st word	1st phrase
Argument	preferred	OK
Predicate	OK	OK

Table 1.2: Preference for copula placement in a **non-neutral** order

The crucial distinction taken up in this thesis is between clitic position in predicates and arguments in a neutral discourse. Whereas splitting (or 'first word' placement) is a preferred discourse-neutral option with predicates, 'first phrase' placement is a preferred discourse-neutral option with arguments.

	1st word	1st phrase
Argument	*	preferred
Predicate	**preferred**	OK

Table 1.3: Preference for copula placement in a **neutral** order

Importantly, the distinction in clitic placement with arguments and predicates as shown in Table 1.3 is a robust property of grammar that has been experimentally corroborated by Diesing and Zec [1], as shown in Figure 1.1., which shows the results of an acceptability judgment task, and Figure 1.2. which shows the results of a production task.
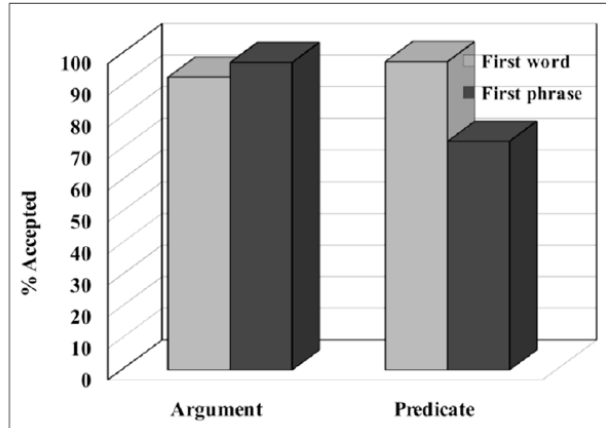
Figure 2: Acceptance rates: mean acceptance rates for the argument (left), and predicate sentences (right) with a clitic positioned after the first word (light gray), and after the first phrase (dark gray).

Figure 1.1: The results of an acceptability task
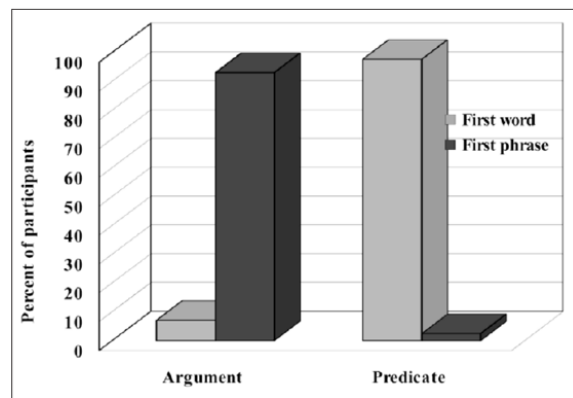
Figure 1: Production results: percent of participants placing a clitic after the first word (light gray), and after the first phrase (dark gray) when completing argument (left), and predicate sentences (right).

Figure 1.2: The results of a production task

There are several variables that play a role in understanding how predicates differ from arguments with respect to clitic position.

1. whether the sentence **predicate** is initial (i.e. is the order predicate-subject) or is it **argument** initial (i.e. is the order subject-predicate);

2. whether the sentence is discourse neutral or discourse marked;

3. whether the sentence is a root clause or a non root clause.

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In this dissertation I am mainly concerned with discourse-neutral predicate-subject orders in a root and a non-root clause. I expand on these points in **Chapter 2**.

1.1.2   Diesing&Zec's analysis

Diesing and Zec [1], assume that 'first phrase/first word' position in the placement of clitics, is a result of satisfying the requirement of a clitic to have a host to its left. This is achieved sometimes in syntax (when entire phrases prepose to a position preceding the clitic) and sometimes in the post-syntactic prosodic component of the grammar (via clitic 'lowering' in the case of 'split' constituents).

Diesing&Zec encode the requirement for a prosodic host in the lexical entry of the clitic, as given in (6) for *je*. The lexical entry should be understood as showing a recursive prosodic structure where *je* attaches to the right edge of a prosodic word via *prosodic inversion* following Halpern [10] [3].

(6)   *Lexical entry for je*: *je* copula [[[important]$_{PW}$ je] $_{PW}$]

To illustrate how the clitic positions are derived in Diesing and Zec [1]'s analysis, let us first consider the 'first word' placement with adjectival predicate, as given in (1-b). Diesing and Zec [1] provide the tree structure in (7) and (8). (7) shows a tree structure prior clitic lowering. *Je* is pronounced in C at the end of a syntactic derivation without any prosodic material to its left.

---

[3]Recursive prosodic structure is required to accommodate a sequence of clitics occurring in a cluster, for instance. I discuss 'clitic clusters' in Chapters 2 and 3.

(7)

```
                    CP
          ┌──────────┴──────────┐
          C                    TopP
          │             ┌────────┴────────┐
          je           AP                 
                  ┌─────┴─────┐     ┌──────┴──────┐
              very important Top            TP
                             │        ┌──────┴──────┐
                           <je>      NP            
                                ┌────┴────┐   ┌─────┴─────┐
                              this task   T        PredP
                                          │          │
                                        <je>        AP
                                                ┌────┴────┐
                                            very important
```
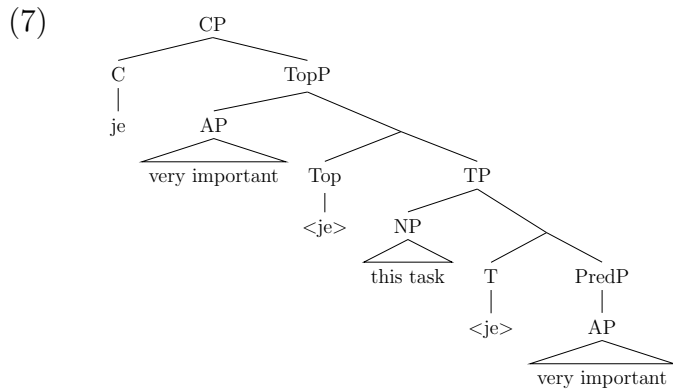
To prevent the derivation from crashing due to the prosodic requirement of *je*, *je* lowers and encliticizes to the closest prosodic host in its c-command domain. Such a host is *very* as shown in (8).

(8)   ('first word', predicate)

```
                    CP
          ┌──────────┴──────────┐
          C                    TopP
          │             ┌────────┴────────┐
        <je>           AP                 
                  ┌─────┴─────┐     ┌──────┴──────┐
           very+je important Top           TP
                             │        ┌──────┴──────┐
                           <je>      NP            
                                ┌────┴────┐   ┌─────┴─────┐
                              this task   T         AP
                                          │    ┌─────┴─────┐
                                        <je> very important
```
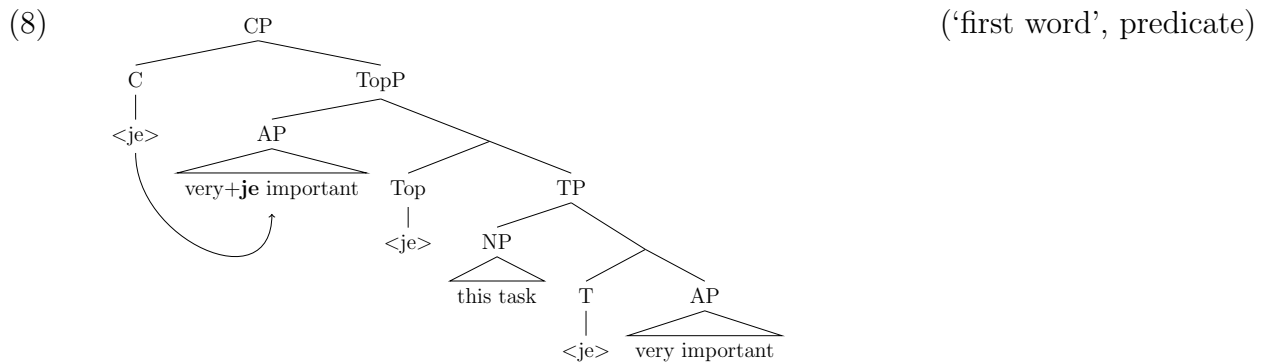
To account for the placement of the clitic following the entire phrase, as shown in (1-a), Diesing and Zec [1] provide the analysis in (9). The clitic, in this case, is spelled out in Top, following the topicalized AP.
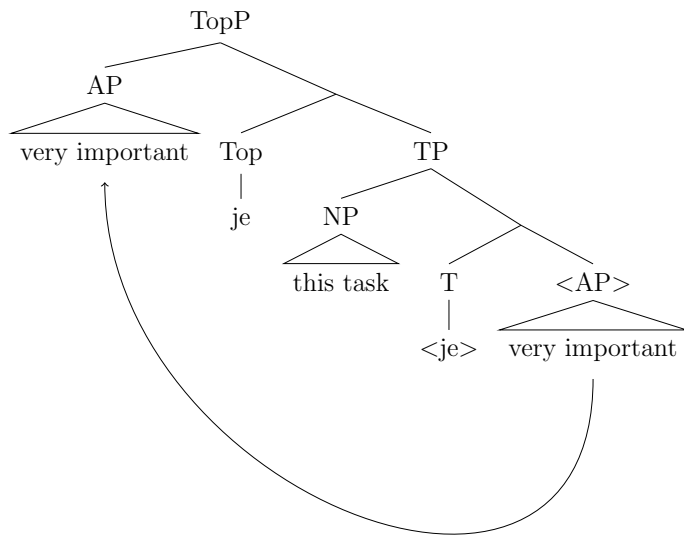
(9)   TopP   ('first phrase', predicate)

```
                        TopP
              AP
      very important  Top        TP
                       |
                       je    NP
                         this task   T        <AP>
                                     |
                                    <je>   very important
```

The analysis given for the resolution of the 'first word' in **arguments** when the first word that the clitic follows is contrastively focused, as in (4-b) is given in (10). The analysis is similar to the one which derives split predicates.

A 'hosteless' *je* which is spelled-out in C, 'lowers' into the closest constituent in spec TopP and encliticizes to the closest prosodic word, the demonstrative *this* (Diesing and Zec [1, p.20]). The operator in spec CP accounts for the fact that '1st word' placement results in contrastive focus interpretation on the '1st word' that the clitic follows (Diesing and Zec [1]).

(10)   CP   ('first word', argument)
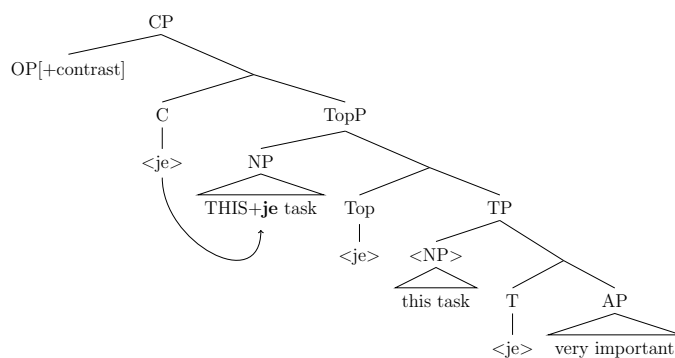
```
                      CP
      OP[+contrast]
                  C          TopP
                  |
                <je>    NP
                   THIS+je task  Top        TP
                                  |
                                <je>  <NP>
                                     this task  T        AP
                                                |
                                              <je>   very important
```

When the clitic follows the entire argument as in (4-a), the subject moves to spec TopP, and

the clitic is spelled out in Top, as shown in (11).

(11)   TopP   ('first phrase', argument)
              NP
        THIS task   Top   TP
                      |
                      je   <NP>
                          this task   T   AP
                                       |
                                     <je>   very important
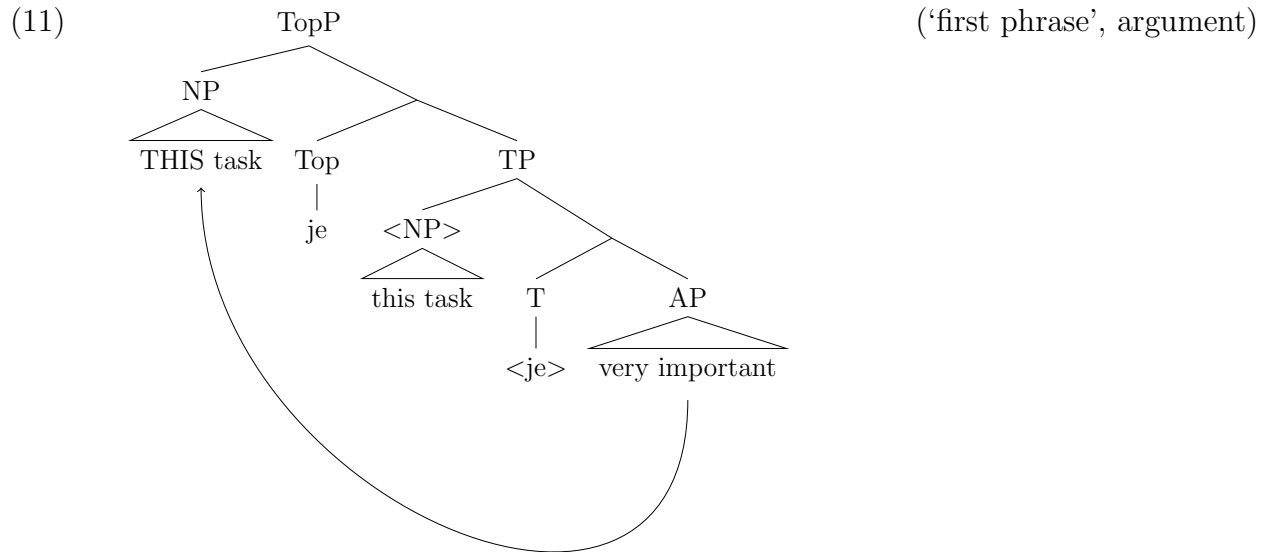
To summarize, Diesing&Zec propose a 'mixed analysis' where the prosodically conditioned lowering derives the split cases and internal merge in syntax the unsplit ones.

The relevant question is whether we need a grammar of clitics which involves two levels of representation; a syntactic one and a prosodic one (as proposed by Schütze [9], Halpern [10]), or we can accommodate the clitic data by allowing it to be resolved only in one component of the grammar. Assuming the latter, the question is which of the two components (i.e. syntax or prosody) would most elegantly and in the simplest manner resolve the clitic position in the grammar.

Let us consider whether we have any reason to assume that syntax could entirely handle the clitic resolution.

The Diesing and Zec [1] data do not necessarily force the post-syntactic analysis in the prosodic component of the grammar, and various facts suggest that the 'first word placement' is not a purely prosodic effect. For instance, whether or not a constituent can be split under a neutral condition depends on whether the constituent is an argument or a predicate. Also,

'spliting' has a different discourse effect in the root and a non-root clause. These properties clearly shows that syntax plays a role, and the question is, to what extent.

In this thesis I argue against prosodically conditioned analysis of the clitic position. I show that the grammar offers no alternative but to assume that the derivations underlying predicate preposing must fall out from the order of Merge in syntax.

The conclusion that the 'second position placement' must be uniformly resolved in syntax is based on the yet unnoticed data which involve *raising to subject* phenomenon, which I present next.

1.1.3 The arguments for a uniformly syntactic analysis

As discussed in more detail in **Chapter 3**, clause initial (unsplit) APs and split APs behave like DP subjects when embedded under the raising predicate *postati* 'become'. See section 3.5.3 on a proof that this predicate triggers raising to subject. Crucially, raising from under *postati*'become' shows that predicates can be 'split' by non-clitic material. I show this below where a strikethrough shows a copy of a moved (i.e. an I merged) constituent.

Let us first consider a canonical case of raising with argumental DPs. (12-a) is a simple DP subject initial clause. I assume the DP subject is externally merged below *biti* 'be', in a small clause, from where it raises to the embedded spec TP position. From the embedded spec TP position, the subject raises to the matrix clause TP (details on small clause subject position is given in Chapter 3). This analysis is shown in (12-b).

(12) a. Njegov doprinos   postaje   biti   baš   neophodan.
          his   contribution become.PRS.3SG be.INF truly necessary
          'His contribution becomes to be necessary.'

      b. [Njegov doprinos]   postaje   [~~TP~~ ~~njegov doprinos~~] biti   baš
          his   contribution become.PRS.3SG his contribution   be.INF truly
          [~~SC~~ ~~njegov doprinos~~ neophodan].
          necessary
          'His contribution becomes to be truly necessary.'

The raising verb *postati*'become' is not a clitic; contrary to *je* (see (13-a)), it cannot split

a subject DP which contains focus, as shown in (13-b).

(13)　　a.　NJEGOV **je**　　　　doprinos　 važan.
　　　　　　　his　　　 be.PRS.3SG contribution important
　　　　　　　'HIS contribution is important.'

　　　　b.　*NJEGOV **postaje**　　　　doprinos　 biti　 važan.
　　　　　　　his　　　 become.PRS.3SG contribution be.INF important
　　　　　　　intended: 'HIS contribution becomes to be important.'

The predicate data are different. (14-a) shows an unsplit AP predicate in a clause initial position. (14-b) shows the analysis of (14-a) where AP raises from below *biti* 'be', through the embedded clause spec TP to the subject position of the matrix clause.

(14)　　a.　Baš　 neophodan postaje　　　　 biti　 njegov doprinos.
　　　　　　　truly necessary　 become.PRS.3SG be.INF his　　 contribution
　　　　　　　'His contribution becomes to be truly necessary.'

　　　　b.　[Baš　 neophodan] postaje　　　　　[$_{TP}$bas neophodan] biti　 [$_{SC}$njegov
　　　　　　　truly necessary　 become.PRS.3SG truly necessary　　 be.INF his contribution
　　　　　　　doprinos bas neophodan].
　　　　　　　truly　　 necessary
　　　　　　　'His contribution becomes to be necessary.'

The example in (15-a) shows that, as opposed to DP arguments, *postati* 'become' can split an AP predicate.

The analysis of (15-a) given in (15-b) shows that the leftmost part of the predicate which contains the degree adverb raises as a complete AP in minus the predicate head *neophodan* 'necessary'. Thus, both (14-a) and (14-b) are parallel except for the fact that in (14-b), the head of the predicate independently vacates and remains in the lower clause, and the rest of the predicate raises, I assume, as a **remnant** (Den Besten and Rutten [11], Den Besten and Webelhuth [12]). The remnant analysis is given in (15-b).

(15)　　a.　Baš　 postaje　　　　 biti　 neophodan njegov doprinos.
　　　　　　　truly become.PRS.3SG be.INF necessary　 his　　 contribution
　　　　　　　'His contribution becomes to be necessary.'

b. [Baš ~~neophodan~~] postaje   biti   neophodan [$_{SC}$njegov doprinos
    truly necessary   become.PRS.3SG be.INF necessary his   contribution
    ~~bas neophodan~~].
    truly necessary
    'His contribution becomes to be necessary.'

While raising of DP subjects is unsurprising, the fact that unsplit APs and, crucially split APs raise as well, forces a conclusion that these XPs must be analysed as 'canonical' subjects as well, a la Moro [2].

Let us consider why the raising data force a syntactic analysis. First, the datum in (15-a) shows that the separation of a degree modifier from the predicate head occurs in the embedded clause, thus, prior to the spell-out of the matrix clause.

Given the standard T-model of grammar (Chomsky [13]), there is Spell-out after the syntactic derivation, followed by readjustment on the prosodic representation. This means that 'splitting' in (15-a) could not have been done *following* the syntactic derivation, as Diesing and Zec [1]'s analysis predicts, but it must have occurred earlier, that is, in the syntactic component. Thus, the result in (15-a) is unexpected given Diesing and Zec [1]'s analysis which is that the split predicates are created by clitic lowering following the 'first word' in the prosodic component of the grammar.

Second, the post-syntactic analysis of 'splitting' further fails by the fact that 'splitting' in (15-a) occurs in the absence of clitics. In that respect, neither *postati* 'become' nor *biti* 'be' are clitics, showing that the motivation for splitting is (at least in these cases) cannot be driven by a prosodic property of clitics.

Having established that AP splitting must be a result of a syntactic derivation, the question is what type of a syntactic operation separates the head of the predicate independently from the rest of the AP?

In Chapter 3, I show that such an operation is **complex predicate formation** with *be*. What remains of an AP following complex predicate formation is a remnant constituent which contains the degree adverb. Such constituent preposes to spec TP via **predicate inversion** (Moro [2], Den Dikken [14]).

The syntactic analysis of 'splits' I propose resembles the analysis of Franks and Progovac [6], since it uses remnant movement to derive split constituents in Serbo-Croatian. Franks and Progovac [6] do the same for the case of split and preposed **PP arguments**[4],but such cases involve different mechanisms for a creation of a remnant.

Preposed split predicates, as found in Diesing and Zec [1] have not been syntactically analyzed before, which is a novel contribution by this thesis.

1.2 'Second position' as a syntactic phenomenon

How do we get clitics in the second position in the linear order if not by post-syntactic lowering? In other words, what are the features of the account I develop in this thesis?

The first assumption is the assumption about the position of a clitic complex. The clitic complex in Croatian consists of heterogenous elements (i.e. pronominal clitics, verbal clitics, the question clitic). As I show in **Chapter 2**, there are two verbal positions for auxiliaries which 'surround' pronominal clitics. These positions are clearly distinct in their feature composition for the auxiliary present tense *be* only: the first and second person and plural agreement forms precede all clitics, and the third person singular form *je* follows the clitics. This suggests that the present form of auxiliary *be* undergoes head movement to a higher position in a clause, as shown in (16).

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[4]Franks and Progovac [6] derives cases of preposed and split PP arguments as (i-a). They propose that the PP fronts as a remnant from which the object has scrambled at an earlier step of a derivation, as shown in (i-b):

(i)   a.   U veliku je   kuću usao Jovan.
               in big   house enter John
               'John entered a big house.'
         b.   [U veliku ~~kuću~~] je   kuću ušao Jovan.
               in big   house be.PRS.3SG house enter John
               'John entered the/a big house.'

(16)

```
          Q
           \
            AgrS.prs.aux(1/2;pl)
                    \
                     Cl
                      \
                       Agr.3sg.prs.je   T
```
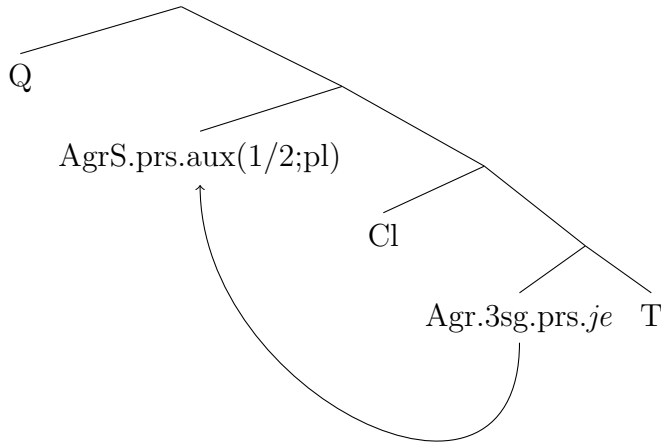
The second assumption is that clitics do not move. I assume clitics are spelled out in a fixed region of the clause, as standardly assumed for Romance (e.g. Kayne [3]). Variation in what occupies the 'first position' in a root and a non-root clause comes about by movement around the (pronominal) clitic complex (in the root clause), and by the external merge of a complementizer in the non-root clause.

This means that to derive the linear second position effect, instead of assuming prosodically conditioned 'lowering' of clitics, we must motivate why a phrase must move around clitics instead, as is the case in the root clause.

What can move to the 'first position' in the root clause? In **Chapter 2**, I argue that in Croatian, just as in Germanic 'verb second' languages, the 'first position' in a root clause must be filled. Since it can be filled with various constituents, I argue that the root node must build a Spec node (implemented as an undifferentiated epp property), since it can be filled with various constituents (any XP will do).

Clitics are heads, and cannot satisfy this property, which means that an XP that comes from under the clitic complex will be attracted to the specifier of the root node. Such an XP, I assume, is subject to *attract closest*. This now shift the problem to the details of the syntactic configuration below the clitic region, in particular the question how predicate initial structures are derived, and how remnants constituents are formed.

The way I introduce the analysis and its ingredients is as follows:

- In **Chapter 2**, I motivate the root/non-root distinction in clitic placement

- Then I determine the position of clitics in the clause (so called, the 'clitic region') also in **Chapter 2**

- Finally, in **Chapter 3** I motivate the analysis of predicate preposing and derive split and unsplit preposed APs in a root and a non-root clause

1.3   The organization of the thesis in a nutshell

The thesis is organized as follows. Chapter 2 motivates the syntax of the root and a non-root clause, and position of clitics in the clause. Chapter 3 discusses the data with AP preposing which are central to this thesis, and motivates the analysis of patterns of predicate preposing in the root and a non-root environment. Chapter 4 concludes the thesis and mentions the remaining problems.

CHAPTER 2

The position of second position clitics in the clause

The chapter sets the background for a syntactic analysis of 'second position clitics' by drawing a parallel between the root phenomenon in Germanic where we find verb second and the fact that root and non-root clauses have different order properties (Emonds [15]). As it will be shown in this chapter, a similar distinction between root and non-root clauses can be made in Croatian. Non-root clauses are taken as a baseline by which we better understand how root orders are derived, and how clitics get to the linear 'second position'. The chapter is organized as follows.

The root/non-root distribution of clitics is given in section 2.3. The analysis, which I provide in section 2.4 shows that the 'second position' is determined by two factors:

- the syntactic position of the clitic

- the structural properties of the clause which determines what precedes the clitic in the root/non-root environment (i.e. what occupies the '1st position').

The clitics, which I introduce in section 2.1, are situated in the clitic region which always follows the highest node projected in a clause and precedes spec TP. As a consequence, clitics are always preceded by the highest merged element in the clause; either externally or internally merged there.

I discuss and analyse discourse marked non-root/root orders in section 2.5.

In section 2.7 I discuss the clausal structure below the left periphery with a special focus on the finite copula/auxiliary *je*. Section 2.8 concludes the chapter.

2.1 Introducing clitics in Croatian

'Second position' enclitics in Croatian come in several types: pronominal (accusative and dative), verbal (future and present tense auxiliary/copula, conditional form of 'be'), a question particle *li* and a reflexive clitic *se*. The example of each is given in Table 2.1[1].

Question	li			
Auxiliary	**Present**		**Future**	**Conditional**
1.sg	sam	'I am	1.sg ću	bih
2.sg	si	'You are'	2.sg ćes	bi
3.sg		'He/She/It is'	3.sg će	bi
1.pl	smo	'We are'	1.pl ćemo	bismo
2.pl	ste	'You all are'	2.pl ćete	biste
3.pl	su	'They are'	će	bi
Pronominal	**dative**	**accusative**		
	mu(M/N),joj(F)	ga(M/N),ju/je(F)		
Reflexive	se			
3.prs.sg	je	's/he is'		

Table 2.1: Second position elements in Croatian

---

[1]M=masculie, N=neuter, F=feminine

When more than one weak element appears in a clause, these elements occur in a fixed linear order, as head complexes, that must be preceded by only one XP, as shown in (1)(where '>' means 'precedes'). When in a cluster, all clitics occur in a particular linear order, given in Table 2.2.

li>	Aux>		DAT>	ACC>	refl.>je
	1,2 and/or plural				
	fut				
	cond				

Table 2.2: Relative order in a clitic cluster

The orders are illustrated in (1) and (2). In the examples below, I am using root questions with the embedded complementizer da, which is standard for Serbian, and possible, though dispreferred (see chapter 4, for further discussion on the environment to the left of *li*.)

(1) Da (*jučer) **li** (*jučer) **si** (*jučer) **mu** (*jučer) **se** ti
     that yesteday li yesterday be.PRS.2SG yesterday him.DAT.SG you   yesterday refl
     jučer   ispricala?
     yesterday apologize.PTCP.F.SG
     'Did you apologize to him yesterday?'   li>AUX(2.pres)>DAT>REFL

Clitic orders with *je* are shown in (2).

(2) a. Da **li mu**   **ju**   **je**   Mara predstavila?
         that li him.DAT.SG her.ACC.SG be.PRS.3SG Mara introduce.PTCP.F.SG
         'Did Mara introduced her to him?'   li>DAT>ACC>je

     b. Da **li bi**   **mu**   **se** ispričala?
         that li be.COND.2SG him.DAT refl. appologize.PTCP.F.SG
         'Would you apologize to him?'   li>COND>DAT>REFL

     c. Da **li se je**   ispričala?
         da li refl be.PRS.3SG apologize.PTCP.F.SG
         'Did she apologize?'   REFL>je

I will point out that apart from *da*'that', *li* can also be preceded by a finite verb in a yes-no

question, as shown in (3). Having a finite verb as a first element of a clause preceding *li* is typically found in Croatian dialects, whereas having *da*'that' preceding *li* is typically found in Serbian dialects.[2]

(3) Hoće li doći?
     will Q come.INF
     'Will he come?'

Apart from yes-no question *li* can also be found in *if*-clauses, in which case the entire clause is archaic/poetic (Google search datum):

(4) Ako **li** je   trn, ti si   triješće za potpalu.
     if   li be.PRS.3SG thorn you be. PRS.2SG wood   for burning
     'If it is a thorn you are a burning wood.'

The third person verbal clitic *je* occurs in a different position in a clitic cluster than all other forms of the present tense 'be' (see Table 2.2). Whereas all forms of verbal clitics occur cluster initially (following *li*) (e.g. (1), for present tense, and (2-b) for conditional forms), *je* must be in a cluster final position (e.g. (2-c)). This pattern is not observed for the third singular forms of any other verbal clitic, except the present form of 'be'.

All of the clitics, except *li*, have a corresponding full form, which is a *marked form* used for emphasiz and contrastive focus (Browne [16]). Full forms are not second position elements, as illustrated in (5), with a range of full form positions with non-clitic 3.sg.prs *jest* and in (6) with a full accusative pronominal form.

Context: You said that Marko is not guilty, but that's simply a lie.

(5) a. Rekla   sam   da JEST   Marko kriv!
         said.PRS.1SG be.PRS.1SG that be.PRS.3SG Marko guilty.M.SG

---

[2]As I will discuss in more details in the Conclusion, *li* is a question particle which occurs in Force and clause-types the embedded clause as a question. I will show that *li* has different properties than declarative root clauses. As opposed to the root node present in the declarative root clause, which has unspecified EPP property, *li* has a specific EPP property which attracts the finite verb or can be satisifed by an external merge of *da*'that'.

'I said that Marko IS guilty!'

    b.   Rekla   sam   da Marko JEST   kriv!
        said.PRS.1SG be.PRS.1SG that Marko be.PRS.3SG guilty.M.SG
        'I said that Marko IS guilty!'

    c.   Rekla   sam   da Marko kriv   JEST!
        said.PRS.1SG be.PRS.1SG that Marko guilty.M.SG be.PRS.3SG
        'I said that Marko IS guilty!'

Context: You said that Marko loves Mara, but that is incorrect.

(6)   a.   Rekla   sam   da NJU   Marko voli!
        said.PRS.1SG be.PRS.1SG that her.ACC Marko love.PRS.3SG
        'I said that Marko loves HER (and not Mara)!'

    b.   Rekla   sam   da Marko NJU   voli!
        said.PRS.1SG be.PRS.1SG that Marko her.ACC love.PRS.3SG
        'I said that Marko loves HER (and not Mara)!'

    c.   Rekla   sam   da Marko voli   NJU!
        said.PRS.1SG be.PRS.1SG that Marko love.PRS.3SG her.ACC
        'I said that Marko loves HER (and not Mara)!'

The analysis that I propose in section 2.3 rests on the assumption that clitics do not move. I assume clitics are spelled out in a fixed region of the clause, as standardly assumed for Romance (e.g. Kayne [3]). Variation in what occupies the 'first position' in a root and a non-root clause comes about by movement around the clitic complex (in the root clause), and by the external merge of a complementizer in the non-root clause.

This means that to derive the linear second position effect, instead of assuming prosodically conditioned 'lowering' of clitics, we must motivate why a phrase must move around clitics instead, as is the case in the root clause.

In the following section, I motivate the clausal structure or the root and a non-root clause.

2.2   Distinction between root and non-root clauses

This section motivates the syntactic analysis of the non-root and the root clause.

First, I present the discourse neutral facts. Then, I proceed to the root and the non-root comparison and propose the analysis which accounts for the discourse neutral orders.

2.2.1 The order in a non-root clause

In non-root clauses, a complementizer or a relative pronoun always precedes the clitic complex. *If* clause is in (7)-(8-a), the relative clause is in (9)-(10-a), and *da*'that' clause is in (11)-(12-a). These sentences are all in a subject-predicate order.

(7) a. Ako **je**   ovaj   članak   vrlo zanimljiv,   onda
     if   be.PRS.3SG this.MASC.SG article.MASC.SG very interesting.MASC.SG then
     ne   znam dobro procijeniti
     not know well   evaluate
     lit.'If this article is interesting, then I don't know what a very interesting article

     looks like.'

   b. *Ako ovaj članak **je**   vrlo zanimljiv, onda...
      if   this article be.PRS.3SG very interesting then
      intended: 'If this article is interesting, then...'   (**if** clause)

(8) a. Ako **si**   **ga**   ti pročitao,   onda znaci   da
     if   be.PRS.2SG it.ACC.SG you read.PTCP.M.SG then mean.PRS.3SG that
     je   na raspolaganju.
     be.PRS.2SG on availability
     'If you read it, then it means that it is available.'

   b. *Ako ti **si**   **ga**   pročitao,   onda...
      if   you be.PRS.2SG it.ACC.SG read.PTCP.M.SG then
      intended:'If you read it, then...'   (**if** clause)

(9) a. Članak, koji **je**   Marko pročitao   je   na stolu.
     article, which be.PRS.3SG Marko read.PTCP.M.SG be.PRS.3SG on table
     'An article, which Marko read be.PRS.3SG on the table.'

   b. *Članak koji   Marko je   pročitao...
      article, which Marko be.PRS.3SG read.PTCP.M.SG
      intended:'An article, which Marko read...'   (**relative** clause)

(10) a. Članak, koji **si**   **mi**   ti dao   je vrlo zanimljiv.
     article   which be.PRS.2SG me.DAT you give.PTCP.M.SG be very interesting
     'An/the article that you gave to me is very interesting.'

b. *Članak, koji ti **si** **mi** dao..
article which you me.DAT be.PRS.2SG give.PTCP.M.SG
intended: 'An/the article that you gave to me...' (**relative** clause)

(11) a. On misli da **je** ovaj članak vrlo
he think.PRS.3SG that be.PRS.3SG this.MASC.SG article.MASC.SG very
zanimljiv.
interesting.MASC.SG
'He thinks that this article is very interesting.'

b. *On misli da ovaj članak **je** vrlo
he think.PRS.3SG that this.MASC.SG article.MASC.SG be.PRS.3SG very
zanimljiv.
interesting.MASC.SG
intended: 'He thinks that this article is very interesting.' (**da**'that'-clause)

(12) a. On misli da **si** **ga** ti pročitao.
he think.PRS.3SG that be.PRS.2SG it.ACC you read.PTCP.M.SG
'He thinks that you read it.'

b. *On misli da ti **si** **ga** pročitao.
he think.PRS.3SG that you be.PRS.2SG it.ACC read.PTCP.M.SG
intended: 'He thinks that you read it.' (**da**'that'-clause)

The data show that clitics must immediately follow the complementizer and precede the subject. The question is how high the clitics are in the structure. This depends on how high the subject is in the clause. In order to determine the position of the subject, I will assume the generalization from Koopman and Sportiche [17], who show that subjects can occupy at least two positions in the clause: spec VP and spec TP. Thus, to be able to locate the clitics in the clause with some precision, first we must know whether the subject has raised to spec TP or not. I investigate the subject positions in the following section.

2.2.2 Position of the subject in the non-root clause

Koopman and Sportiche [17] determine that subjects are associated with (at least) two positions: the external merge position in spec VP and the internal merge position in spec TP. Accordingly, I will refer to the latter as a *high* position. I will treat the position of the subject in a small clause as a *low* position.

If the subject can be determined in a VP external position preceding the tensed verb (i.e. in a high position), then this will be taken to indicate that *je* (and other clitics) must be in an even higher position, but below the surface position of the complementizer. On the other hand, if the subject must be in a low position, this will be taken to indicate that *je*/the clitics must be in the T region.

As a diagnostic, I use the Q-float test with a universally quantified DP *svi članci* 'all articles'. The Q-float test shows a syntactic dependency between the quantifier and the DP which is dissociated from the quantifier in the linear order (Sportiche [18]). The position of the quantifier and the associate will be taken to show two different subject positions in the clause.

Before showing the Q-float data, where the quantifier is detached from the associated DP in a clause, first, I will show that we have reasons to assume that before the 'separation', the universal quantifier is externally merged in a (subject) DP.

The universal quantifier is associated with the highest position in the extended head-final nominal domain in Croatian. (13) shows the hierarchical order within the Croatian DP: (Leko [19], Caruso [20]).

(13) $[_{QP}\forall \mathbf{svi}[_{Dem}[_{Num5+}[_{Poss}[_{APind}[_{Num2,3,4}[_{APdir}[_{NP}\check{c}lanci]]]]]]]$

The quantifier precedes the plural NP as shown in (14).

(14)   a.   **svi** članci
        all   articles

        all>NP

        b.   *članci **svi**   *NP>all

When *svi članci* 'all articles' is a complement of a preposition, such as *o* 'about', the available order still must be all>NP. This suggests that in the complement of a preposition *all* and the NP form a constituent, as shown in (16).

(15)   a.   O   svim   člancima
              about all.DAT.PL articles.DAT.PL

                                                                    P>all>NP

        b.   *O   člancima svim
              about articles   all

                                                                    *P>NP>all

(16) $[_{PP}[_P$ o $]$ $[_{QP}$ svim $[_Q]$ $[_{NP}$ člancima $]$ $]$ $]$

Once we have determined that *all* and the associated DP form a constituent, I move to the Q-float data. (17-a) shows the 'complete' QP before Q-stranding in the position following the adverb *očito*'obviously'. (17-b) shows Q-stranding: *All* can follow the NP in clausal environments. (17-c) shows the analysis of Q-stranding in (17-b). In this case, the NP *članci* 'articles' and *all* are discontinuous, which is further supported by the fact that an adverb can occur between the quantifier and the associated NP. In other words, NP movement to the high subject position can strand the quantifier (Sportiche [18]).

(17)   a.   Ako su   **očito**   svi članci vrlo zanimljivi, onda...
              if   be.PRS.3PL obviously all articles very interesting then
              'If all articles are obviously very interesting, then..'

        b.   Ako su   članci **očito**   svi vrlo zanimljivi, onda...
              if   be.PRS.3PL articles obviously all very interesting then
              'If the articles are obviously all very interesting, then..'

        c.   Ako su   članci **očito**   svi ~~članci~~ vrlo zanimljivi, onda...
              if   be.PRS.3PL articles obviously all articles very interesting then
              'If the articles are obviously all very interesting, then..'

The result in (17-b) is interpreted to show that the stranded quantifier and the preposed NP, are associated with two subject positions: the quantifier is associated with the low, VP internal subject position, and *članci* 'articles' is associated with the high, spec TP subject position.

Since the subject is preceded by the clitic (as shown by the the position of *su* in ((17-b)), it follows that the second position clitics are higher than the position where subjects are located.

I conclude that in non-root clauses clitics immediately follow the complementizer, but precede the subject, in clauses with the subject-predicate order.

2.2.3 The position of clitics

The clitics, as seen in the previous data, must immediately follow *da*'that' and precede the subject. I assume the structure of the non-root declarative clause with the clitic region as given below.

(18)
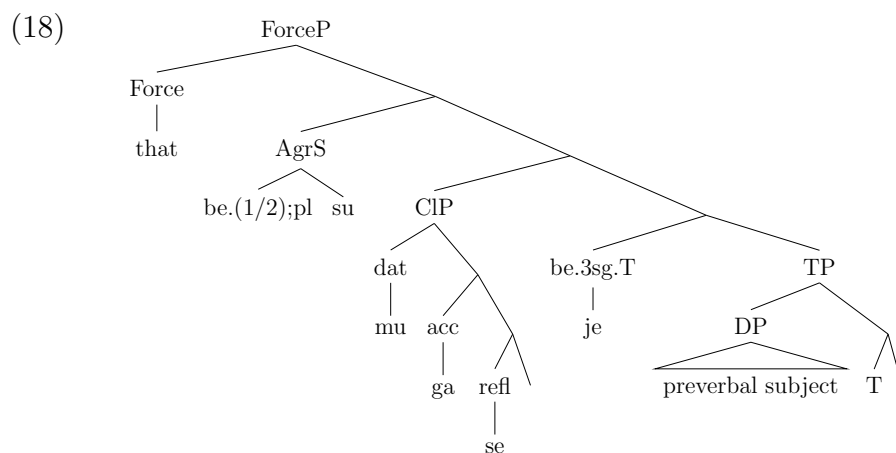
The region below C is the Wackernagel 'clitic region'. As shown, I assume this domain spans across several heads in a clausal spine. There are two verbal heads for auxiliaries, with the pronominal clitics 'sandwiched' in between them. The higher head expresses subject agreement for 1 and 2 person, and /or plural, the lower head 3rd person singular. This suggests that the verb 'be' undergoes movement from the lower head 3rd person singular. The verb 'be' undergoes movement from the lower position (namely T), to the higher position, driven by the person and number features located on the higher head. I will call that head position AgrS, for convenience. The extended clitic complex consisting of pronominal elements have a fixed linear order. It is not important for my argumentation whether the pronominal clitics (*mu*'to him', *ga*'him', *se*'refl.') reach their surface position by Internal merge or whether they are external merged in this position: what matters is their relative

position w.r.t to the C and the subject[3].[4].

To summarize, in this section I have established the high region of the non-root clause with the subject predicate order repeated for convenience in (19).As we can see, the clitic region does not seem to constitute a syntactic constituent; it rather seems to be the case that individual clitics are independent constituents.

(19)
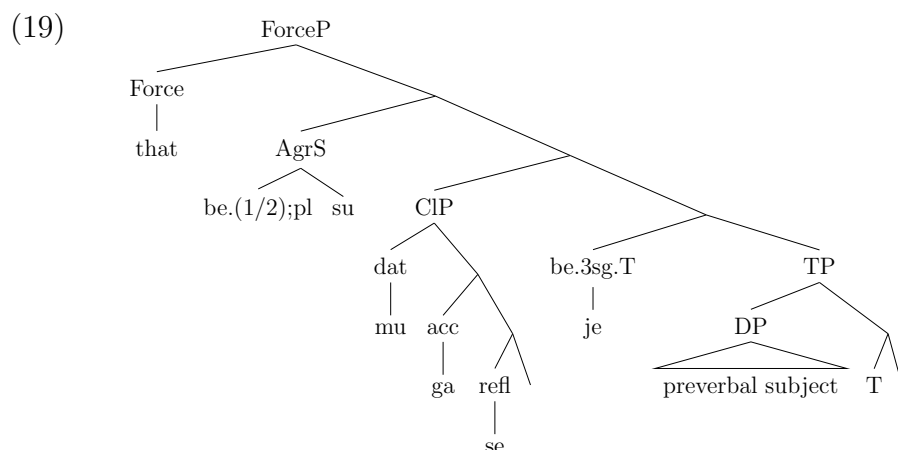
The highest node is Force where the complementizer is merged. The clitic region immediately follows the complementzier and the preverbal subject immediately follows the clitic region.[5]

Next, I turn to the analysis of the 'second position' in the root clause.

2.3 Accounting for the root/non-root asymmetry

Standard analyses for Croatian assume clitics go after whatever the first word or a constituent in the main clauses is. As I argue more extensively in Chapter 3, this reduces to the '1st phrase' position in my analysis. The question I now address is how we can motivate what comes in 'the first position' in a root clause, by keeping the location of the clitics stable, and

---

[3]For arguments which support the assumption that weak elements in Croatian are distinct constituents see Stjepanović [21], and Bošković [8]

[4]The relative order of a reflexive clitic *se* and *je*, which is such that *se* can either precede or follow *je* when it co-occurs with it in a clause. Accounting for these orders is beyond the scope of the thesis.

[5]The syntax of clitics I propose here is consistent with the older proposals such as Progovac [7], Wilder and Ćavar [22].

by relying on well attested and uncontroversial syntactic processes.

This requires a brief detour to the analysis of the 'verb second' phenomenon in West Germanic languages such as German, which provides an important ingredient for the analysis[6].

2.3.1 The root clause phenomenon

The '1st position' in a root clause in German can be occupied by different kinds of XPs. In (20-a), it is occupied by an adverb, in (20-b) by an object, in (20-c) by a subject, and in (20-d) by a predicate. The finite verb always occurs following these elements, in the 'second position'.

(20)   a.   **Gestern** hat   er ein buch gelesen.
            yesterday have.PRS.3SG he one book read.PTCP
            'He read a book yesterday.'

         b.   **Ein Buch gelesen** hat   er nicht.
            a book read.PTCP   have.PRS.3SG he not
            'He didn't read a book.'

         c.   **Er** hat   ein Buch gestern   gelesen.
            he have.PRS.3SG a   book yesterday read. PTCP
            'He read a book yesterday.'

         d.   **Sehr interessant** ist   dieser Artikel.
            very interesting   be.PRS.3SG this   article
            'This article is very interesting.'

Similar facts occur in a root clause in Croatian. In the neutral discourse, the '1st position' in the root clause can be occupied by different types of constituents. In (21-a), it is occupied by an adverb, in (21-b), by an object and in (21-c) by a wh-word.

(21)   a.   **Trenutno** je   ovaj članak vrlo zanimljiv.
            currently   be.PRS.3SG this article very interesting
            'Currently, this article is very interesting.'

---

[6]Drawing a parallel between root phenomena in Croatian and German was already hinted at in Wilder and Ćavar [22], although not explored to the same detail or in the same manner as I present here.

b. **Ove** **studente** **je** Mara poznavala.
   this.ACC.PL student.ACC.PL be.PRS.3SG Mara know.PTCP.F.SG
   'Mara knew these students.'

   c. **Kakav** **je** ovaj članak?
   what.like be.PRS.3SG this article
   'What kind of an article is this one?'

The comparison of German and Croatian root clauses shows two things. First, the '1st position' must be filled, and second, the XP which moves to the '1st position' must be the highest XP in the clause.

If the analysis is on the right track, we expect that the available orders below the clitic in the non-root clause feed into the root clause. In other words, if the highest XP in the non-root is a subject, then in the root clause, the subject should be in the '1st position', if it is an adverb, then the adverb should be in the '1st position' in the root clause etc.

We can now draw a parallel between German and Croatian, as illustrated below. Both languages have XP in first position in root clauses. If Root node has an EPP property, which will simply attract the highest XP, then clitics will be in the 'second position' (they are heads and, thus, do not qualify as XPs).

Root clause:

- Croatian: [XP... *CL.*. YP]

- German: [XP... V$_f$in... YP]

The standard analysis of the V2 as a root phenomenon involves two operations: V to C and a movement of the closest XP to spec CP (where only one spec CP is available in order to ensure that only one XP precedes the verb) (Den Besten [23]).

I assume that a similar analysis derives clitic second in root clauses in Croatian. The clitics are below root and a movement of the highest XP (visible in the non-root environment) moves to the '1st position' in the root clause via *attract closest*.

I provide a detailed analysis in the following subsection.

2.3.2 Analysis of the '1st position' in the root clause

So far, I have established the '1st position' in a root and a non-root clause. In a non-root clause, the '1st position' is always occupied by a complementizer. In the root clause, the '1st position' is always occupied by the closest XP to root. Schematically, this is shown in the table below.

	1st position	2nd position
root	XP	CL.complex
non-root	da'that'	CL.complex

In this section, I explore how we get an XP in the '1st position' in the root clause. So far, I have focused on subject-predicate orders, and for convenience, I am going to show how we get the root order where the subject is in the '1st position', as shown in (22-b). As a rule, before deciding what goes '1st' in the root order, I will look at the non-root order. The latter enables us to determine the highest XP, which will become the '1st XP' in the root order. The highest XP in the clause will always be an XP that immediately follows the clitics (see (22-a)). The subject data in the subject-predicate order are given below.

(22)   a.   Ne znam ako **je**   ovaj članak još uvijek aktualan.
            not know if   be.PRS.3SG this article still always relevant
            'I don't know if this article is still relevant.'   (the non-root order)

       b.   Ovaj članak **je**   još uvijek aktualan.
            this   article be.PRS.3SG still always relevant
            'This article is still relevant.'   (the root order)

The subject position in the non-root clause is shown in (23). As shown in (23), the subject is immediately following the clitic region and, thus, counts as the highest XP.

(23)

```
                    ForceP
              ┌────────┴───────────┐
           Force                    │
             │            ┌─────────┴──────┐
           that        be.3sg.T            TP
                           │         ┌──────┴──────┐
                          je        DP             │
                                ┌────┴────┐        │
                            this article  T
```
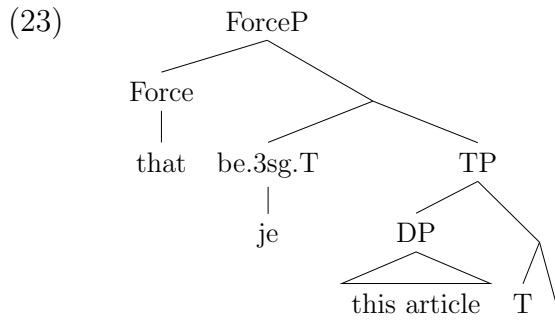
(24) shows the subject in the root clause, where it moves as the closest XP to root to spec rootP.

(24)

```
                         rootP
              ┌────────────┴──────────────┐
             DP                             │
          ┌───┴────┐        ┌──────────────┴────────┐
      ovaj clanak  root_EPP                       ForceP
                               ┌──────────────────────┴────┐
                            Force                           │
                                          ┌─────────────────┴──────┐
                                      be.3sg.T                      TP
                                          │              ┌──────────┴──────┐
                                         je            <DP>               │
                                                   ┌─────┴─────┐          │
                                               this article    T
```
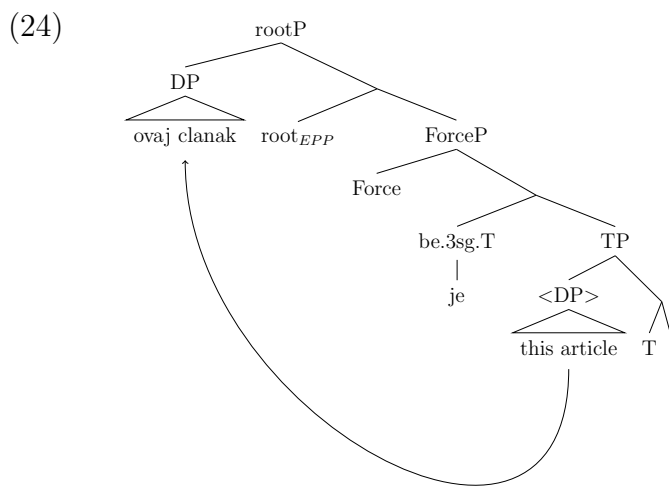
Crucially, as shown in (24), my analysis rests on the assumption that it is the subject that moves not the clitic. Clitics, recall from section 2.2.3, remain in the fixed position, sandwiched between the complementizer and TP. Once the highest XP moves to spec rootP, the clitics linearly occur in the 'second position'.

2.3.3 The high adverb initial clauses

In this subsection I show adverb-subject orders where a temporal ('high') adverb *danas*'today' occupies the '1st position' in the root clause as the closest XP to root.

(25) shows why *danas* 'today' is a 'high' adverb. It must precede the DPs subject ((25-a)) and cannot follow it ((25-b)).

(25) a. Ne znam ako je   **danas** ovaj članak vrlo aktualan.
          not know if   be.PRS.3SG today this article very relevant
          'I don't know if this article is today very relevant.'

      b. ???Ne znam ako je   ovaj članak **danas** vrlo aktualan.
          not   know if   be.PRS.3SG this article today very relevant
          'I don't know if this article is today very relevant.'

The root data show *today* in a clause initial position.

(26) **Danas** je   ovaj članak vrlo aktualan.
      today   be.PRS.3SG this article very relevant
      'This article is today very relevant.'

I assume that the temporal adverb is adjoined to spec TP (following Bošković [8]).

The position of the adverb as the highest XP in the non-root clause is given in (27).

(27)
```
             ForceP
            /      \
        Force       \
          |          \
         if    be.3sg.T   TP
                 |       /   \
                je    AdvP    TP
                     / \      / \
                 today  T
```
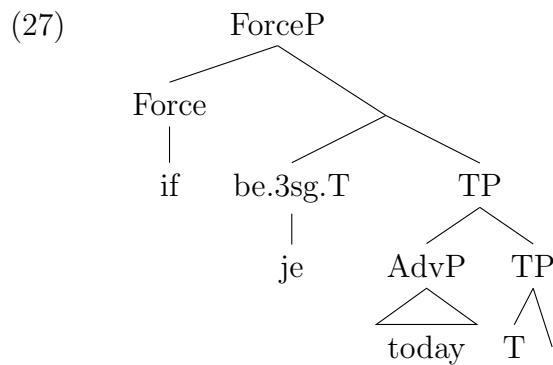
As the highest XP in the non-root cause, the adverb becomes the closest XP to root in the root clause. Consequently, it gets attracted to spec rootP as shown in (28).

(28)
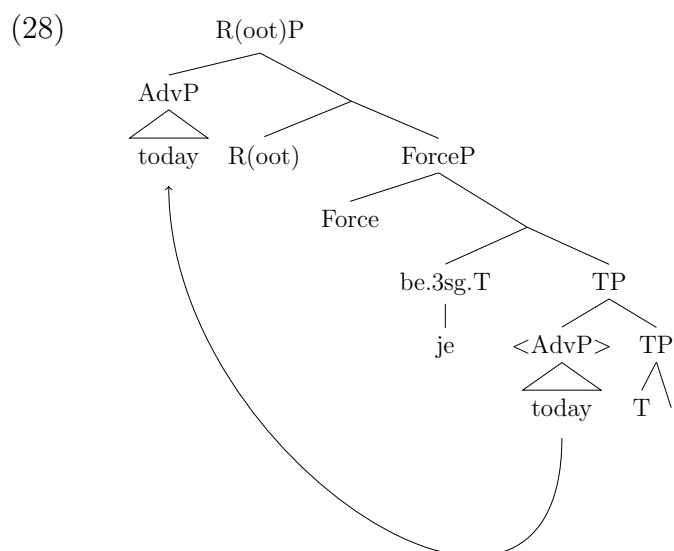
2.3.4 Predicate initial root clauses

In this subsection, I show how AP, NP and PP predicates can occupy the '1st position' in the root clause.

2.3.5 NP predicates

The data with the NP predicate subject orders are given in (29-b) and (29-c). (29-a) shows the subject-predicate order in the non-root clause.

(29)   a. Ne znam ako je ovaj čovjek dobar znanstevnik.
            not know if   be this man   good scientist
            'I don't know if this man is a good scientist.'

        b. Ne znam ako **je**   dobar znanstvenik ovaj čovjek.
            not know if   be.PRS.3SG good scientist   this man
            'I don't know if this man is a good scientist.'

        c. Dobar znanstevnik **je**   ovaj čovjek.
            good scientist   be.PRS.3SG this man
            'This man is a good scientist.'

I assume that all small clause predicates undergo predicate inversion to spec TP; I motivate the analysis in Chapter 3.

Once the NP predicate is inverted to spec TP, it becomes the highest XP in the non-root clause as given in (30).

(30)

```
              ForceP
             /      \
        Force         \
          |            \
         if   be.3sg.T      TP
                 |         /   \
                je       NP      \
                        /  \      \
                 good scientist  T
```
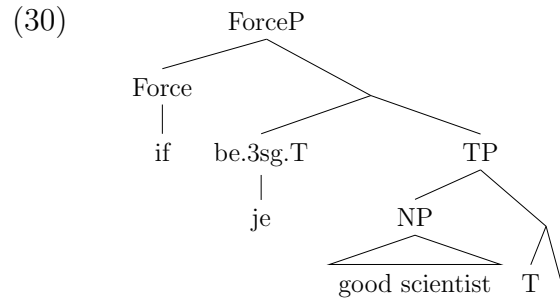
Consequently, the preposed NP as the highest XP undergoes movement to spec rootP as the closest XP to root as given in (31).

(31)

```
                rootP
              /       \
          NP            \
         /  \            \
  good scientist  root    ForceP
                         /      \
                    Force        \
                          be.3sg.T      TP
                             |         /    \
                            je      <NP>      \
                                   /    \      \
                            good scientist    T
```
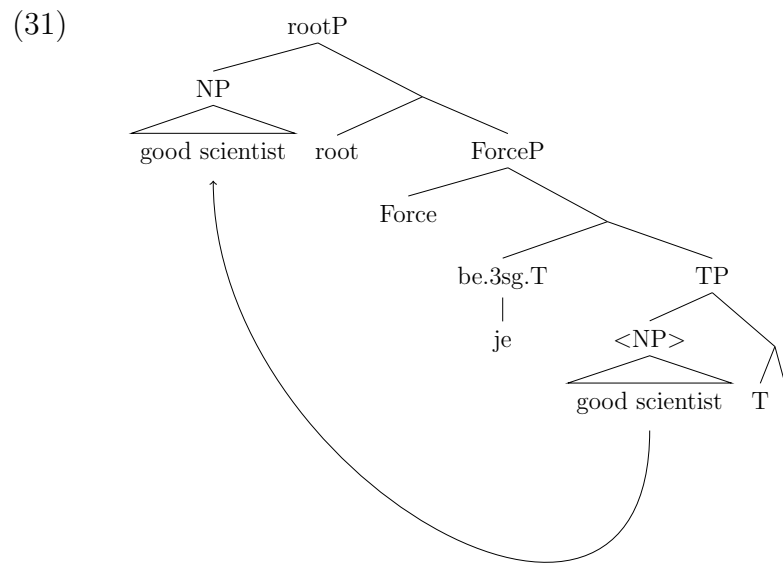
2.3.5.1 PP predicates

The data with the PP predicate subject orders are given in (32-b)-(32-d). (32-a) gives the subject predicate order. As shown in (32-c) and (32-d), there are two possibilities in the root clause. The unsplit pattern, as in (32-c) and the split pattern, as in (32-d).

(32)   a.   Ne znam ako je Mara ušla   u veliku prostoriju.
             not know if be Mara enter.PTCP.F.SG in big   room
             'I don't know if Mara entered the big room.'

       b.   Ne znam ako je   u veliku prostoriju ušla   Mara.
             not know if be.PRS.3SG in big   room   enter.PTCP.F.SG Mara
             'I don't know if Mara entered the big room.'

       c.   U veliku prostoriju je   ušla   Mara.
             in big   room   be.PRS.3SG enter.PTCP.F.SG Mara
             'Mara entered the big room.'   (the unsplit pattern)

       d.   U veliku je   prostoriju ušla   Mara.
             in big   be.PRS.3SG room   enter.PTCP.F.SG Mara
             'Mara entered the big room.'   (the split pattern)

Following Franks and Progovac [6] analysis of split PP predicates as in (32-d), I assume split PP predicates should be analysed as remnant constituents, where the PP remnant is created by an independent evacuation of the object of a preposition as shown in (33) (following analysis in Franks and Progovac [6]).

(33)   [U veliku ~~prostoriju~~] je   prostoriju ušla   Mara.
       in big   room   be.PRS.3SG room   enter.PTCP.F.SG Mara
       'Mara entered the big room.'

Independent movement of the object in Croatian is supported by the data in (34). As shown in (34), the accusative object can occur in all positions in a sentence[7]. Objects in different linear positions are bolded.

---

[7]To determine precisely what the discourse conditions are which correlate with object preposing as in (34-b) and (34-c) is a matter of a different study.

(34) a. Mara čita   **knjigu**.
          Mara read.PRS.3SG book.ACC
          'Mara reads a/the book.'   (object final)

      b. Mara **knjigu**   čita.
          Mara book.ACC read.PRS.3SG
          'Mara reads a/the book.'   (object medial)

      c. **Knjigu** čita   Mara.
          book.ACC read.PRS.3SG Mara
          'Mara reads a/the book.'   (object initial)

As with other predicates, PP predicates also undergo predicate inversion to spec TP. Returning to the position of the unsplit PPs in a root and a non-root clause, the position of the preposed PP as the highest XP in the non-root clause is given in (35).
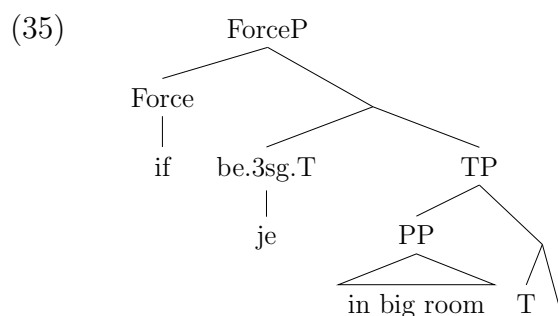
(35)

The position of the preposed PP as the highest and the closest XP to root is given in (36).

(36)

rootP

   PP

   in big room   root   ForceP

   Force

   be.3sg.T   TP

   je   <PP>

   in big room   T
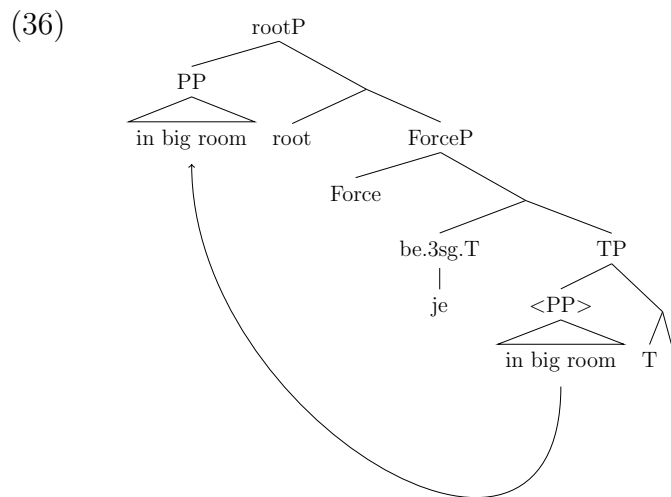
The position of the preposed PP remnant as the highest XP in the non-root clause is given in (37).

(37)

ForceP

   Force

   if   be.3sg.T   TP

   je   PP

   in big room   T
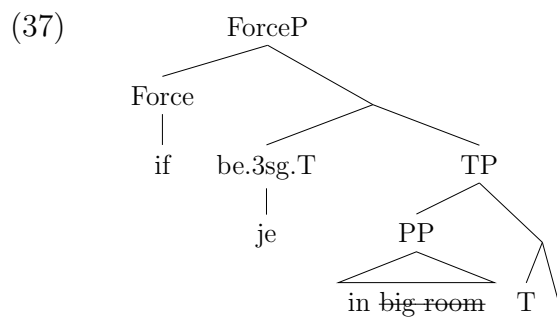
The position of the PP remnant as the highest and the closest XP to root is given in (38).

(38)
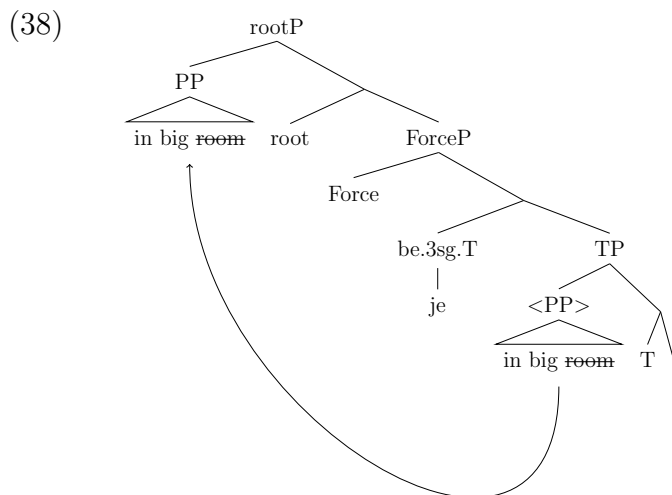
Next, I show the AP data.

2.3.6 AP predicates

The data with the AP predicate subject orders are given in (39-a)-(39-e). (39-a) shows a subject-predicate order in a non-root clause. As shown in (39-c) and (39-d), there are two orders allowed in the root clause, the 'split' and the unsplit. As indicated in the (39-e), I analyse the 'split' pattern as an AP remnant. I leave the motivation for the analysis for Chapter 3.

(39) a. Ne znam ako je ovaj članak vrlo zanimljiv.
        not know if   be this article very interesting
        'I don't know if this article is very interesting.'

      b. Ne znam ako je   vrlo zanimljiv   ovaj članak.
        not know if   be.PRS.3SG very interesting this article
        'I don't know if this article is very interesting.'

      c. Vrlo zanimljiv   je   ovaj članak.
        very interesting be.PRS.3SG this article
        'This article is very interesting.'   (the unsplit order)

      d. Vrlo je   ovaj   članak.
        very interesting be.PRS.3SG this   article

'This article is very interesting.' (the split order)

e. [Vrlo ~~zanimljiv~~] je ovaj članak.
very interesting be.PRS.3SG this article
'This article is very interesting.'

I assume that AP predicates undergo predicate inversion to spec TP. Once in this position, the unsplit preposed AP becomes the highest XP in the non-root clause as given in (40).

(40)

```
                ForceP
              /        \
        Force          
          |            
         if    be.3sg.T      TP
                  |        /    \
                 je      AP      T
                        /  \
                very interesting
```
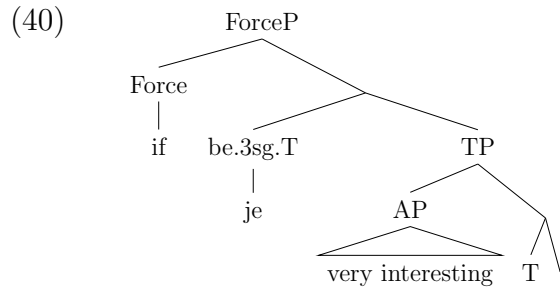
Consequently, the AP in spec TP as the highest XP and the closest XP to root undergoes movement to spec rootP as given in (41).

(41)

```
                       rootP
                    /         \
              AP              
            /    \            
      very interesting  root      ForceP
                              /        \
                          Force         
                             be.3sg.T        TP
                                |         /      \
                               je      <AP>       T
                                      /    \
                                very interesting  T
```
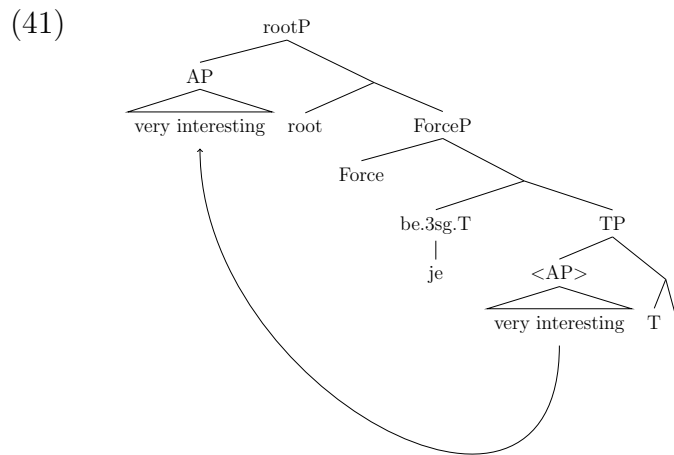
AP remnants, likewise, undergo predicate inversion to spec TP. The position of the preposed remnant AP as the highest XP in the non-root clause is given in (42).

(42)

```
                    ForceP
              _____/_____
          Force              \
            |          _____/_____
           if      be.3sg.T            TP
               |          _____/_____
              je        AP                   T
                    ___/\___
                 very  interesting
```
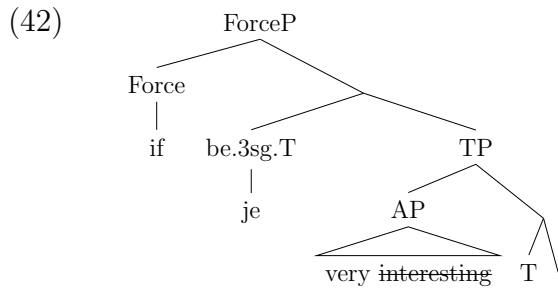
The position of the preposed AP remnant as the highest and the closest XP to root is given in (43).

(43)

```
                       rootP
              _____/_____
           AP                    \
        __/\__            _____/_____
    very interesting  root          _____/_____
                            be.3sg.T            TP
                                |         _____/\_____
                               je      <AP>           T
                                    __/\__
                                 very interesting
```
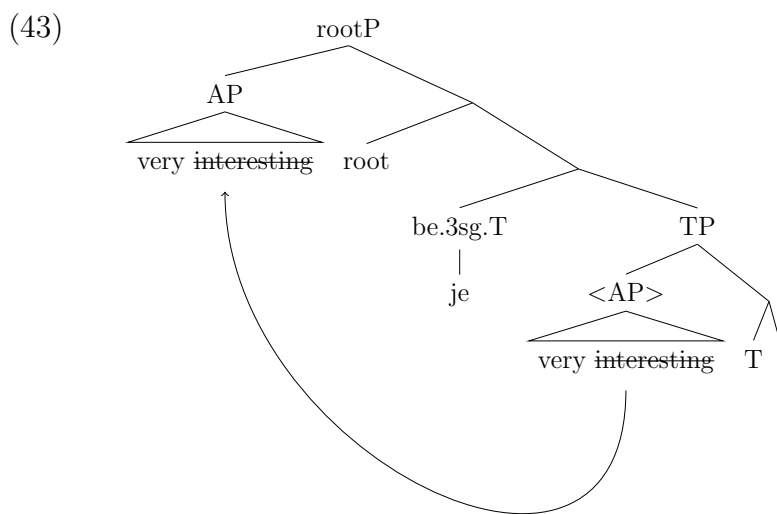
2.3.6.1 The participle initial orders

In this subsection, I show that finite and participle verbs can also occupy the '1st position' in the root clause. It follows from my analysis, when they do so, they must prepose as XPs. This analysis goes against previous analyses of verb initial root clauses such as Wilder and Ćavar [22] and Boskovic [24] which assume (long)head movement to a clause initial position.

First, I show that a participle can occupy the '1st position' in the root clause.(44-a) shows a subject initial order.

In a non-root clause, the participle can either precede (e.g (44-c)) or follow the DP subject

((44-d)). The fact in (44-c) appears in the root clause as (44-e).

(44)   a.   On kaže   da je   Mara kupila   knjige.
            he say.PRS.3SG that be.PRS.3SG Mara buy.PTCP.F.SG books.ACC.PL
            'He says that Mara bought books.'

       b.   da je   kupila   knjige Mara.
            that be.PRS.3SG buy.PTCP.F.SG books Mara
            '...that Mara bought (the) books.'

       c.   da ih   je   **kupila**   Mara.
            that them.CL.ACC.PL be.PRS.3SG buy.PTCP.F.SG Mara
            '...that Mara bought them.'

       d.   ...da ih   je   Mara **kupila**.
            that them.CL.ACC.PL be.PRS.3SG Mara buy.PTCP.F.SG
            '...that Mara bought them.'

       e.   Kupila   **ih**   **je**   Mara.
            buy.PTCP.F.SG them.CL.ACC.PL be.PRS.3SG Mara
            'Mara bought them.'

How do we analyse the pattern in (44-e)? I will assume that first, the object clitic *ih* 'them' vacates the VP (first, possibly, to AgrOP[8]) where it is internally merged. Following the movement of the clitic, the VP remnant which contains the participle undergoes predicate inversion to spec TP. This is shown in (45).

(45)   [Kupila   ~~ih~~]   **ih**   **je**   Mara.
       buy.PTCP.F.SG them.CL.ACC.PL them.CL.ACC.PL be.PRS.3SG Mara
       'Mara bought them.'

I assume that the participle is the highest XP in the non-root clause as a VP remnant, as shown in (46).

---

[8]The analysis of how object clitics move and to which positions is beyond the scope of this thesis. The important fact is that the object clitic ends up in the clitic region of the clause, see section 2.2.3.

(46)

ForceP

Force
|
that

be.3sg.T
|
je

TP

VP

buy ~~them~~ T
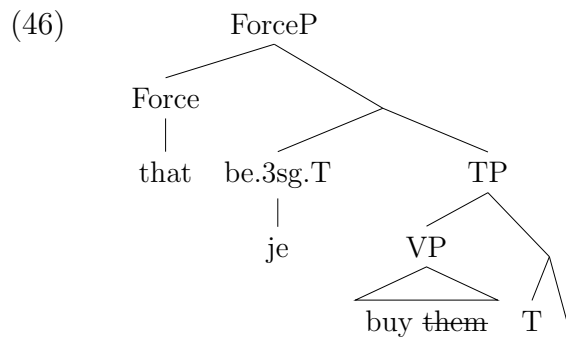
As a consequence of the participle placement in the non-root clause, the VP remnant becomes the closest XP when the root node is merged, and it raises to spec rootP, as shown in (47).

(47)

rootP

<VP>

buy ~~them~~   root

ForceP

Force

CL
|
them

be.3sg.T
|
je

TP

<VP>

buy ~~them~~   T
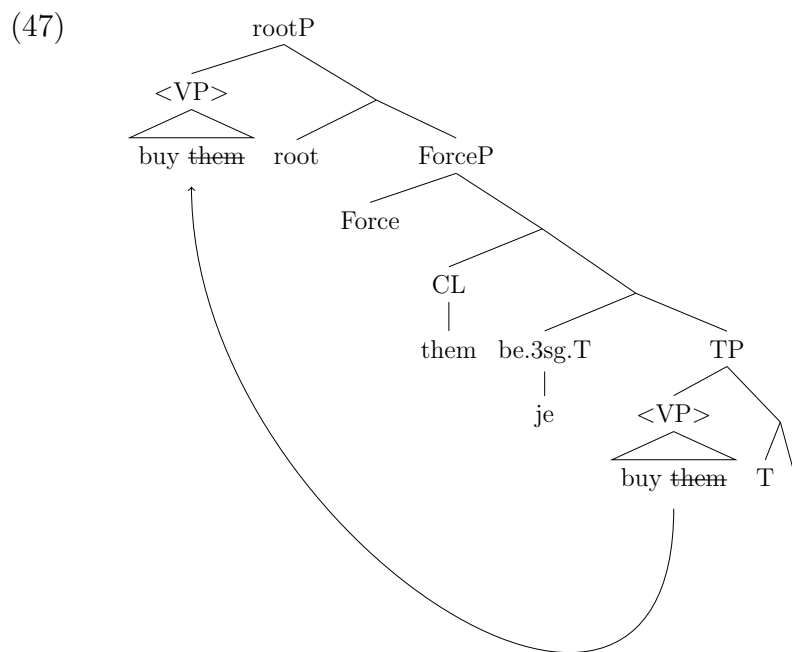
Next, I show the analysis of finite verb initial root clauses.

2.3.6.2 Finite verb initial clauses

The datum in (48-a) shows the subject-verb order in the non-root clause. The data in (48-c)
and (48-d) show the order of the finite verb with respect to the subject. (48-d) additionally
shows the position of the finite verb w.r.t a cliticized object. (48-e) shows the finite verb
initial root clause.

(48)   a.   On kaže   da   Mara kupuje   knjige.
            he say.PRS.3SG that Mara buy.PRS.3SG books.ACC.PL
            'He says that Mara buys books.'

       b.   da   Mara kupuje   knjige.
            that Mara buy.PRS.3SG books.ACC.PL
            '..that Mara buys books.'   (subject initial)

       c.   da   kupuje   knjige   Mara.
            that buy.PRS.3SG books.ACC.PL Mara
            '..that Mara buys books.'   (predicate initial)

       d.   da   ih   kupuje   Mara.
            that them.ACC.CL.PL buy.PRS.3SG Mara
            '..that Mara buys them.'

       e.   Kupuje   ih   Mara.
            buy.PRS.3SG them.ACC.CL.PL them.ACC.CL.PL Mara
            'Mara buys them.'

I assume that to drive the pattern in (48-e), the object clitic vacates the VP first, followed
by remnant predicate preposing through spec TP.

(49)   [Kupuje   ~~ih~~]   ih   Mara.
       buy.PRS.3SG them.ACC.CL.PL them.ACC.CL.PL Mara
       'Mara buys them.'

It then follows that in the non-root clause the highest XP is the VP remnant which contains
the finite verb, as shown in (50).

(50)

```
                    ForceP
                   /      \
              Force         \
                |       /        \
              that    Cl          TP
                       |         /    \
                     them      VP      \
                              /  \      \
                           buy  them    T
```
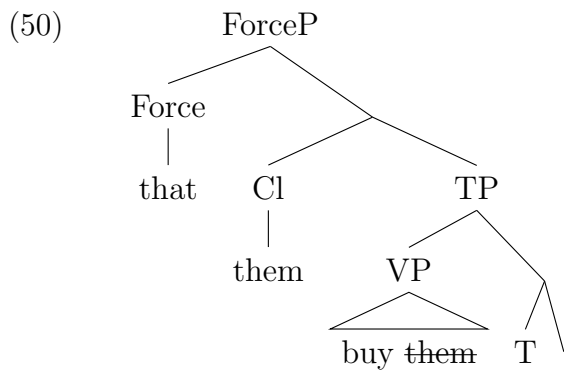
When the root node is merged, the VP remnant is the closest to root. Consequently, it gets attracted to spec rootP, as shown in (51).

(51)

```
                    rootP
                  /       \
              VP            \
             /  \      /         \
          buy them  root          ForceP
                              /         \
                          Force          \
                                    /          \
                                  Cl            TP
                                   |          /    \
                                 them      <VP>      \
                                          /   \       \
                                        buy  them     T
```
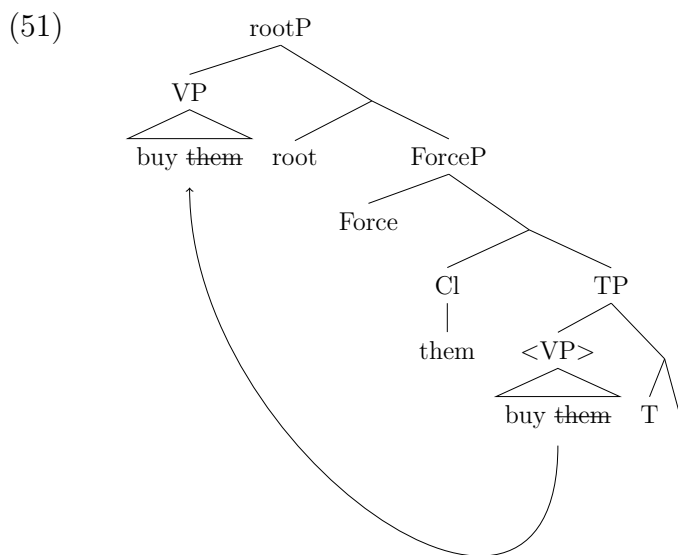
To summarize, so far I have considered subject predicate orders and predicate subject orders in a neutral discourse in two clause types. The next question is what happens with the non-neutral orders and how are these derived in the root and a non-root clause.

The next question is, how do we derive all other types of XPs in the '1st position' in the root clause, given the non-root orders other than subject initial ones? In what follows, I will consider:

1. Predicate-subject orders, where the highest XP is an adjectival, nominal, verbal or a prepositional predicate

2. Object-subject orders, where the highest XP is the object

3. Adverb-subject orders, where the highest XP is the adverb

In Chapter 3, I motivate and in the following section assume that, superficially, object and low adverb initial orders must be analysed as clause initial VP remnants that contain the adverb/the object. In this way, what superficially looks like a DP object initial and low adverb initial root clauses are merely instances of root clause initial VPs.

The pattern of preposing which derives superficially object initial, low adverb initial and degree adverb initial clauses (as with 'split' modified APs) is the same and consists of two steps: one where the predicate head (the verb or the adjective) evacuates the small clause, and the other where the VP or AP remnant becomes the highest XP in the clause by predicate inversion to spec TP (a la Moro [2]). I motivate both complex predicate formation and predicate inversion in Croatian in Chapter 3.

2.3.7 Object initial clauses

The object subject non-root and root orders are given in (52-b) and (52-c). (52-a) provides a basic, subject initial order in the non-root clause.

(52) a. Ne znam ako je   Mara pročitala   ovaj članak.
     not know if   be.PRS.3SG Mara read.PTCP.F.SG this article
     'I don't know if Mara read this article.'

     b. Ne znam ako **je**   ovaj članak pročitala   Mara.
     not know if   be.PRS.3SG this article read.PTCP.F.SG Mara
     'I don't know if Mara read this article.'

     c. Ovaj članak **je**   pročitala   Mara.
     this article be.PRS.3SG read.PTCP.F.SG Mara
     'Mara read this article.'

To reach the '1st position' in the root clause, as the highest XP the object must have moved

to a position higher than the subject. How does the object becomes higher than the subject? There are two obvious hypotheses. It either moves on its own (in which case, the movement across the subject potentially incurs a minimality violation) or it preposes as a part of the VP remnant, which is created by the participle evacuating the VP earlier in the derivation. I explore the two hypotheses in detail in Chapter 3, and conclude that the object preposes in a VP remnant. The VP remnant undergoes predicate inversion by means of which the VP contaning the object becomes the highest XP in the non-root clause.

The position of the preposed object contained in a VP remnant that has undergone predicate inversion in the non-root clause is given in (53).

(53)

```
                        ForceP
                       /      \
                 Force         \
                   |        be.3sg.T      TP
                  that        |          /  \
                              je        VP    \
                                       /  |    \
                                 read this article   T
```
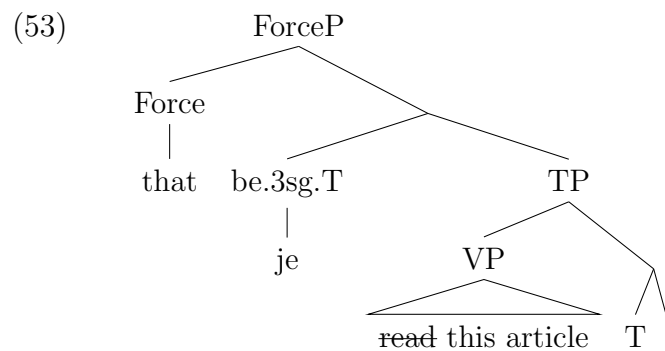
The position of the VP remnant as the highest and closest XP to root is given in (54).

(54)

```
                              rootP
                        ┌───────┴────────┐
                      VP                  │
             ┌─────────┴──────┐    ┌──────┴────────┐
        r̶e̶a̶d̶ this article  root_EPP          ForceP
                                        ┌──────┴────────┐
                                     Force              │
                                 ┌─────┴──────┐   ┌──────┴─────┐
                               be.3sg.T        │ TP
                                  │        ┌────┴─────┐
                                 je     <VP>          T
                                    ┌─────┴──────┐
                               r̶e̶a̶d̶ this article  T
```
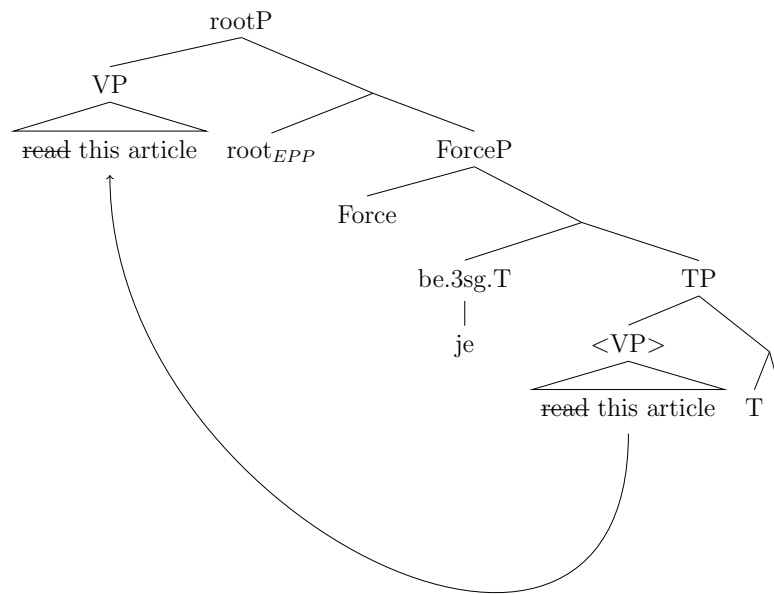
2.3.8   Low adverbs as the closest XPs

In this subsection, I show that the low (manner) adverb *dobar* 'well' can be in the '1st position' in the root clause. I motivate the 'low' (small clause adjoined) merge of *dobar* 'well' in Chapter 3.

As shown in (55), the manner adverb can either follow or precede the subject in the non-root clause. We can explain this fact by assuming (given the analysis of the subject position in Koopman and Sportiche [17]) that in (55-b) we observe the subject in its external merge position within a VP, and in (55-a), we observe the subject in the raised, spec TP position.

(55)   a.   Ne znam ako je   Mara **dobro** odradila   svoj posao.
            not know if   be.PRS.3SG Mara well   do.PTCP.F.SG her work
            'I don't know if Mara did her work well.'

       b.   Ne znam ako je   **dobro** Mara odradila   svoj posao.
            not know if   be.PRS.3SG well   Mara do.PTCP.F.SG her work
            'I don't know if Mara did her work well.'

In order for the 'low' adverb to be the highest XP and consequently the closest XP to root, as must have been the case in (56), the subject must have remained below the adverb. Thus, the 'input' order in the non-root clause must have been the one in (55-b).

(56) **Dobro** je   Mara odradila   svoj posao.
      well   be.PRS.3SG Mara do.PTCP.F.SG self work
      'Mara did her job well.'

How does the manner adverb raise to spec TP? One possibility is that it preposes on its own, as we have assumed 'high'(temporal) adverbs do. The alternative possibility, which I pursue in Chapter 3, is that the manner adverb preposes as a part of a VP remnant. The VP remnant has undergone predicate inversion to spec TP. Contained in the VP remnant which has undergone predicate inversion, the adverb becomes superficially the highest XP in the non-root clause as given in (57).

(57)

```
              ForceP
             /      \
            /        \
        Force         \
          /  \         \
    be.3sg.T   \        TP
         |      \      /  \
         je      \    VP   \
                 /  \       T
               well done her work   T
```
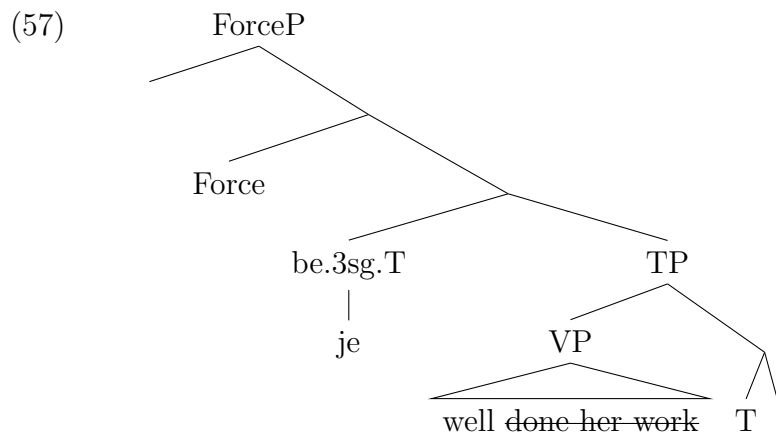
Once the root node is merged as shown in (58), the adverb contained in the VP remnant is the highest and the closest XP to root. Consequently, the remnant is attracted to spec rootP.

(58)

```
                    rootP
              ┌───────┴──────────┐
             VP                  │
          ┌───┴───┐          ┌───┴─────┐
    well done her work     root      ForceP
                                  ┌────┴────────┐
                                Force           │
                              ┌───┴────┐    ┌───┴────────┐
                            be.3sg.T   │   TP
                                │          ┌───┴──────────┐
                               je       <VP>              │
                                     ┌────┴─────┐      ┌───┴──┐
                               well done her work   T
```
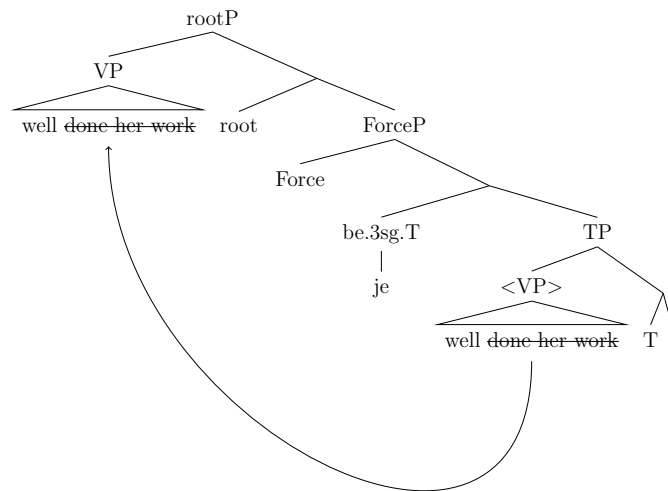
2.4 Embedded left periphery: [Force [(Top) [(Foc) [CL]]]]

In this section I show the merge order in the left periphery and the analysis of the topic and focus initial orders in a root clause.

First, I start with an overview of the analysis of the left periphery as given in Rizzi [25], which motivates the analysis of the left periphery in Croatian.

2.5 Assumptions on the structure of the left periphery (Rizzi 1997)

Much in tradition of what has been done for the TP domain (Pollock [26]) and VP domain (Larson [27]), Rizzi [25] motivates separation of the complementizer layer of the clause into several functional projections.

There are two systems in the left periphery of the clause: the Force-Finiteness system and the Topic-Focus system, each containing separate functional projections.

The complementizers, which express the information about the type of a clause (i.e. a question, a declarative, a conditional etc) are a part of the force-finiteness system, associated

with a functional projection headed by Force. The same system contains Fin(iteness), a functional projection which expresses the relationship between the complementizer and the finiteness of the clause it selects (as seen, for instance, in English, where *for* selects a non-finite clausal complement, and *that* selects a finite one).

Topic and Focus are a non-essential part of the left periphery and are activated whenever topic/focus features are present in the derivation of a sentence.

The articulated left periphery, as I adopt as well, is shown in (59) (Rizzi [25]).

(59)
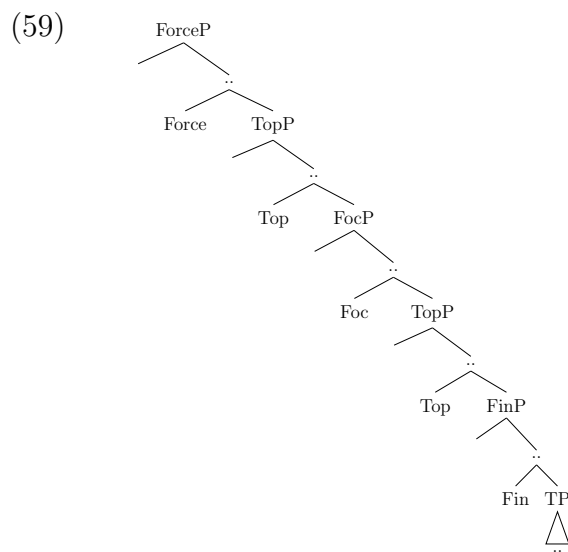
Having established the theoretical framework necessary for the analysis of the root/non-root clause, I proceed to the data.

2.6 Focus and topic in the non-root clause

It is a well known fact that clitic position in the non-root clause is more flexible in marked orders (Bošković [8], Cavar and Wilder [28]). In such cases, an XP, which is interpreted either as a topic or a focus immediately follows the complementizer (Comp) and precedes the clitic region (CL). Such constructions are commonly referred to as the 'clitic 3rd' cases because of the position of the clitic in the non-neutral linear order.

(60)   Comp>Foc/Top>CL

       1st   2nd   3rd

Given my analysis, the 'clitic 3rd' orders follow from the activation of the left peripheral positions projected above the clitic region.

In the following subsection, I show the data which motivates the left periphery, sandwiched between the complementizer and the clitic region as shown in (60).

2.6.1 Focus initial orders

In this section, I show focus initial orders with both arguments and predicates.

2.6.1.1 Argument initial focus

I start with the object-subject orders containing focus. (61-b) and (61-c) is an example of contrastively focused object that occurs in the region between the complementizer and the clitics.

The datum in (61-a) is a neutral subject-predicate order. Focus on the argument can be realized in two different ways. Either by preposing the entire object to a pre-clitic position, as in (61-b) or by the left branch extraction of the focus bearing demonstrative to a position preceding the clitics, as in (61-c). I indicate focus in capital letters. The root clause reflects the two focus realization possibilities: either the entire argument is in the '1st position' as in (61-d), or only the focus bearing demonstrative is, as shown in (61-e).

Context: Bill thinks that John read an article on Jakub Orlinski, but that's not true.

(61)   a.   On misli   da je   Ivica   pročitao ovaj   clanak.
             he think.PRS.3SG that Ivica read.PTCP.M.SG this   article
             'He thinks that Ivica read this article.'

        b.   On misli   da   OVAJ članak **je**   Ivica pročitao.
           he think.PRS.3SG that this   article be.PRS.3SG Ivica read.PTCP.M.SG

'He thinks that THIS article Ivica read (and not the one on Jakub Orlinski).'

c. On misli   da OVAJ **je**   članak Ivica pročitao.
   he think.PRS.3SG that this be.PRS.3SG article Ivica read.PTCP.M.SG
   'He thinks that THIS article Ivica read (and not the one on Jakub Orlinski).'

d. OVAJ članak je   Ivica pročitao.
   this   article be.PRS.3SG John read.PTCP.M.SG
   'Ivica read THIS article.'   (unsplit argument)

e. OVAJ je   članak Ivica pročitao.
   this be.PRS.3SG article John read
   'Ivica read THIS article.'   (split argument)

For the unsplit argument to occur in the '1st position' in the root clause, it must have been established as the highest XP in the non-root clause, immediately preceding the clitics. The position of the unsplit focused XP in the non-root clause is given in (62).

(62)
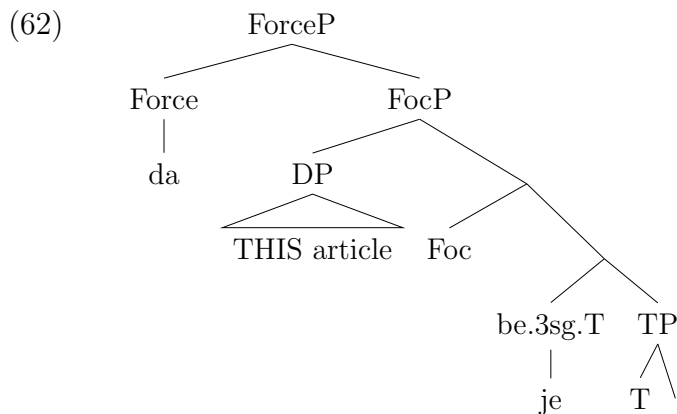
For the focused demonstrative in (61-e) to have occurred in the '1st position' in the root clause, it must have been the highest XP in the non-root clause as shown in (63).

(63)

```
                    ForceP
              ┌───────┴────────┐
           Force              FocP
            │            ┌──────┴──────┐
           da          DemP           Foc
                        /\        ┌────┴──────────┐
                      THIS     be.3sg.T          TP
                                  │          ┌────┴───┐
                                  je        DP        T
                                            /\
                                       T̶H̶I̶S̶ article
```
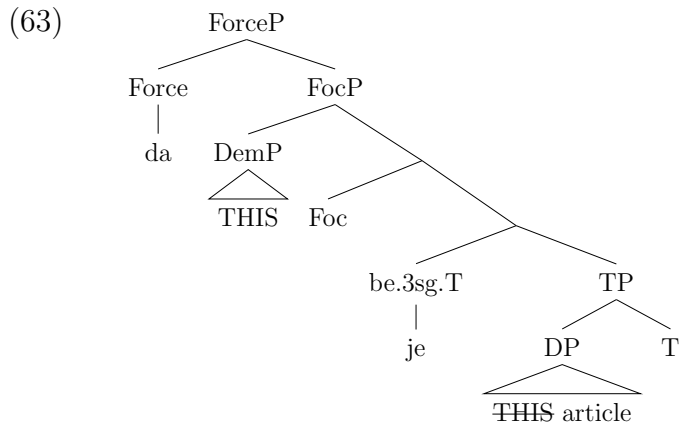
The position of the unsplit focused argument as the highest XP, and consequently the closest XP to the root node is given in (64) and the position of the focused demonstrative in the split argument, as the highest and the closest XP to root is given in (65). As the closest XPs, these focused phrases move to spec rootP.

(64)

```
                         rootP
              ┌────────────┴──────────────┐
             DP                            │
             /\              ┌─────────────┴─────────┐
       THIS article        root                    ForceP
                                            ┌─────────┴────────┐
                                          Force               FocP
                                                         ┌──────┴──────┐
                                                       <DP>           │
                                                        /\       ┌─────┴─────┐
                                                  THIS article  Foc        │
                                                                    ┌───────┴───┐
                                                                 be.3sg.T      TP
                                                                    │          /\
                                                                    je        T
```

53

(65)

```
                              rootP
                         ╱          ╲
                    DemP              ╲
                   ╱    ╲          ╱        ╲
                THIS   root      ForceP
                              ╱          ╲
                          Force          FocP
                                      ╱        ╲
                                 <DemP>          ╲
                                ╱     ╲       ╱        ╲
                             THIS     Foc
                                    ╱        ╲
                               be.3sg.T        TP
                                   │         ╱    ╲
                                  je       DP      T
                                        ╱    ╲
                                     THIS article
```
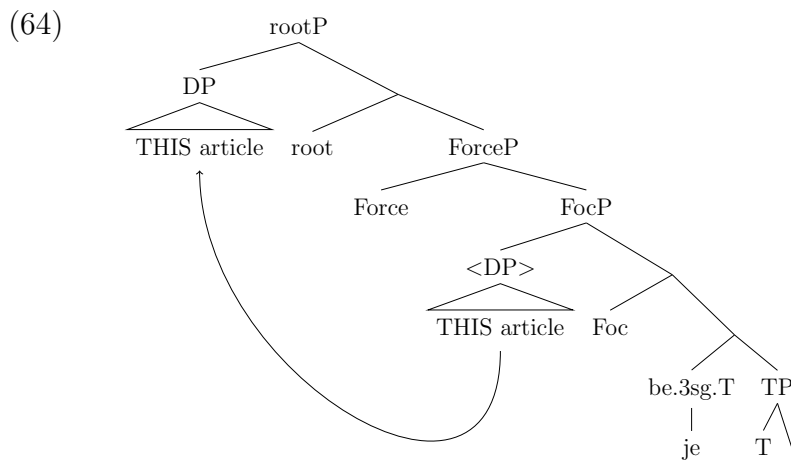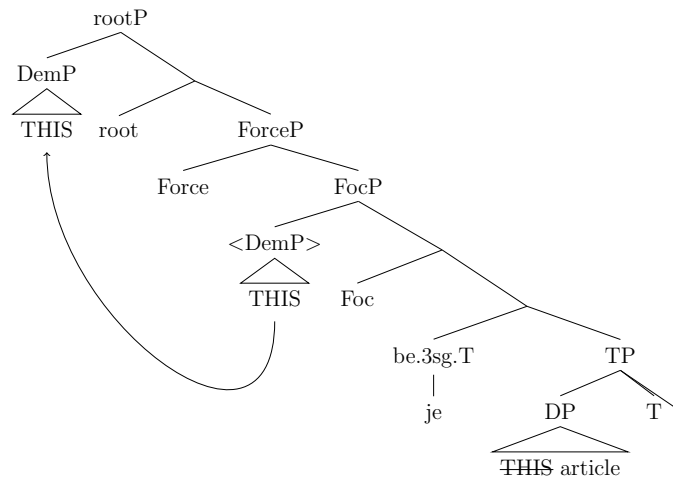
2.6.1.2 Predicate initial focus

Predicates also allow two options for focus realization: either the focus bearing participle pied-pipes the entire VP to the left periphery, as in (66-a) or only the participle itself preposes to the focus position as shown in (66-b). When it appears, superficially, that the participle preposes on its own as in (66-b), I assume that what preposes in that case is a VP remnant, as shown in (66-c). The neutral subject predicate order is for convenience given in (66-d).

Context: You think that Ivan thinks that Mara bought a car for Ivica, but that is not true.

(66)   a.   On misli   da KUPILA   auto **mu** **je**   Mara, a
              he think.PRS.3SG that buy.PTCP.F.SG car   he.DAT be.PRS.3SG Mara and
              ne prodala.
              not sell.PTCP.F.SG
              'He thinks that Mara BOUGHT him a car, (and not sold him one).'

        b.   On misli   da KUPILA   **mu** **je**   auto Mara, a
              he think.PRS.3SG that buy.PTCP.F.SG he.DAT be.PRS.3SG car   Mara and
              ne prodala.
              not sell.PTCP.F.SG
              'He thinks that Mara BOUGHT him a car, (and not sold him one).'

        c.   On misli   da [$_{VP}$KUPILA   ~~auto~~] **mu** **je**   auto Mara,
              he think.PRS.3SG that buy.PTCP.F.SG car   he.DAT be.PRS.3SG car   Mara
              a   ne prodala.
              and not sell.PTCP.F.SG
              'He thinks that Mara BOUGHT him a car, (and not sold him one).'

    d. On misli   da **mu** **je**   Mara kupila   auto.
          he think.PRS.3SG that he.DAT be.PRS.3SG Mara buy.PTCP.F.SG car
          'He thinks that Mara bought him a car.'

The root clause reflects the two focus possibilities by allowing either the unsplit VP in the '1st position', as shown in (67-a) or the split VP in the same position, as shown in (67-b). The 'split' VP is preposed to the '1st position' in the root clause as a VP remnant, as shown in (67-c).

(67)   a. KUPILA   auto **mu** **je**   Mara.
           buy.PTCP.F.SG car he.DAT be.PRS.3SG Mara
           'Mara BOUGHT him a car (and not sold one to him).'   (the 'unsplit' VP)

      b. KUPILA   **mu** **je**   auto Mara.
           buy.PTCP.F.SG he.DAT be.PRS.3SG car Mara
           'Mara BOUGHT him a car (and not sold one to him).'   (the 'split' VP)

      c. [$_{VP}$KUPILA   auto] **mu** **je**   auto Mara.
           buy.PTCP.F.SG car he.DAT be.PRS.3SG car Mara
           'Mara BOUGHT him a car (and not sold one to him).'   (the 'split' VP)

The position of the unsplit focused predicate as the highest XP in the non-root clause is given in (68) and the position of the predicate remnant as the highest XP in the non-root clause is given in (69).

(68)
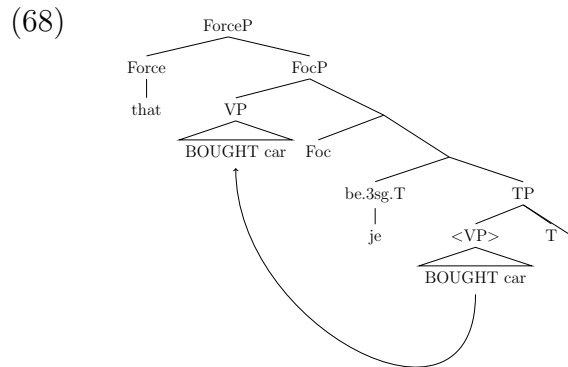
(69)
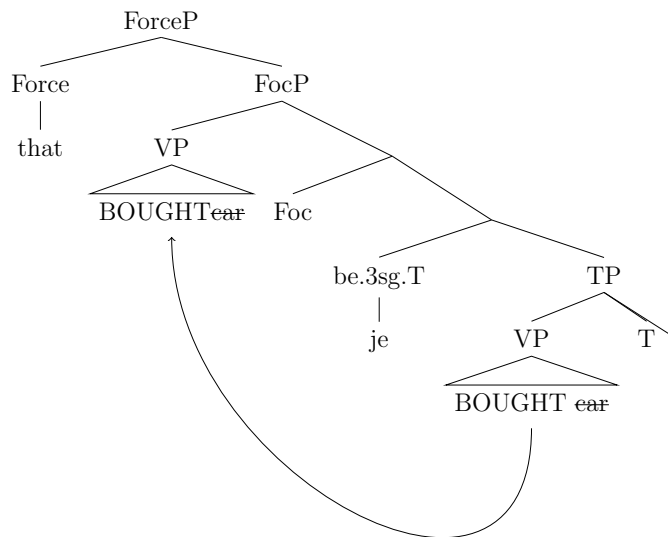
The position of the unsplit focused predicate as the highest XP in the root clause is given in (70), and the position of the focused VP remnant is given in (71). As the highest and, consequently, the closest XPs to the root node, these VPs undergo movement to spec rootP, which derives the root orders.

(70)

(71)

```
                    rootP
            ┌──────────┴──────────┐
           VP                    ┌─┴─────┐
        ┌───┴──┐               root    ForceP
   BOUGHT ear  root                  ┌────┴────┐
                                  Force       FocP
                                          ┌────┴────┐
                                        <VP>        │
                                     ┌───┴──┐    ┌──┴────┐
                                BOUGHT ear  Foc  │       │
                                            be.3sg.T     TP
                                              │      ┌────┴───┐
                                              je    VP        T
                                                 ┌───┴──┐
                                              BOUGHT ear
```

Next, I consider orders containing topic.

2.6.2 Topic initial orders

By **topic**, I assume 'an old information, salient/available in the previous context'(Rizzi [25]:285). In what follows, I show topic initial orders with both the argument initial and the predicate initial order.

2.6.2.1 'Argument' initial topics

The datum in (72-b) shows an object subject order in the non-root clause where the object is topicalized.[9]. (72-c) shows a topicalized object in the '1st position' in the root clause. (72-a), for convenience, provides the neutral subject-object order in a non-root clause.

Context: Who does he think read this article to John?

(72)   a.   On misli   da   mu   je   Marko pročitao   ovaj
            he   think.PRS.3SG that he.DAT. be.PRS.3SG Marko read.PTCP.M.SG this
            članak.
            article
            'He thinks that Marko read this article to him.'

---

[9]Note that the analysis of a superficial object-verb orders is revised in Chapter 3, where I show that what looks like an object initial root clause is actually a root clause initial VP remnant.

b. On misli   da ovaj članak **mu**   **je**   pročitao
   he think.PRS.3SG that this article he.DAT. be.PRS.3SG read.PTCP.M.SG
   Marko.
   Marko
   'He thinks that Marko read this article to him.'   (**topic**, argument)

c. Ovaj članak **mu**   **je**   pročitao   Marko.
   this article he.DAT. be.PRS.3SG read.PTCP.M.SG Marko
   'Marko read this article to him.'

To have been able to occupy the '1st position' in the root clause, the topicalized argument must be the highest XP in the non-root clause, as shown in (73).

(73)
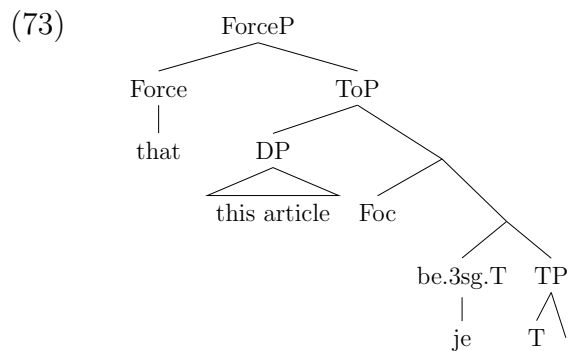
The position of the topicalized argument as the highest XP and consequently the closest XP to root is given in (74). As the closest XP to root, the topicalized object undergoes movement to spec rootP.

(74)
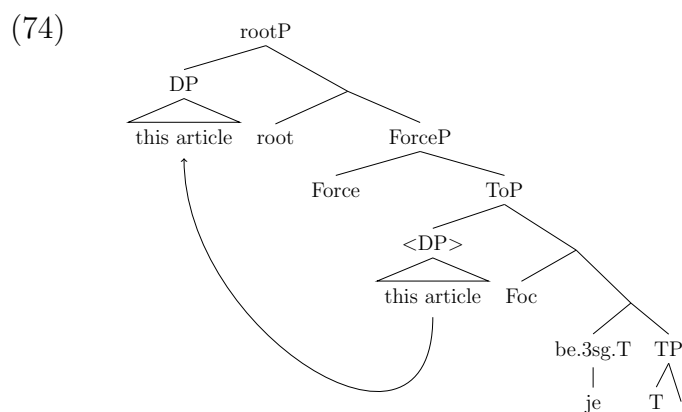
2.6.3 Predicate initial topics

The datum in (75-b) shows predicate subject orders where the predicate is topicalized in the non-root clause. (75-c) and (75-d) show the two ways a topicalized predicate can occur as the XP in the '1st position' in the root clause. In (75-c), the topicalized VP is unsplit, and in (75-d), the VP is 'split'. I analyse (75-d) as VP remnant preposing as shown in (75-e). The neutral, subject-predicate order is, for convenience, repeated in (75-a).

I assume, it is the VP remnant that does so.

Context: Who does he think bought him a car?

(75)   a.   On misli   da mu   je   Mara kupila   auto.
             he think.PRS.3SG that he.DAT be.PRS.3SG Mara buy.PTCP.F.SG car.ACC
   'He thinks that Mara bought him a car.'

         b.   On misli   da kupila   auto   **mu**   **je**   Mara.
             he think.PRS.3SG that buy.PTCP.F.SG car.ACC he.DAT be.PRS.3SG Mara
             'He thinks that Mara bought him a car.'

         c.   Kupila   auto   **mu**   **je**   Mara.
             buy.PTCP.F.SG car.ACC he.DAT be.PRS.3SG Mara
             'Mara bought him a car.'   (the 'unsplit' VP)

         d.   Kupila   **mu je**   auto   Mara.
             buy.PTCP.F.SG car he.DAT be.PRS.3SG car   Mara
             'Mara bought him a car.'   (the 'split' VP)

         e.   [$_{VP}$Kupila   ~~auto~~] **mu**   **je**   auto Mara.
             buy.PTCP.F.SG car   he.DAT be.PRS.3SG car   Mara
             'Mara bought him a car.'

The topicalized unsplit VP as the highest XP in the non-root clause is given in (76), and the topicalized remnant VP as the highest XP in the non-root clause is given in (77).
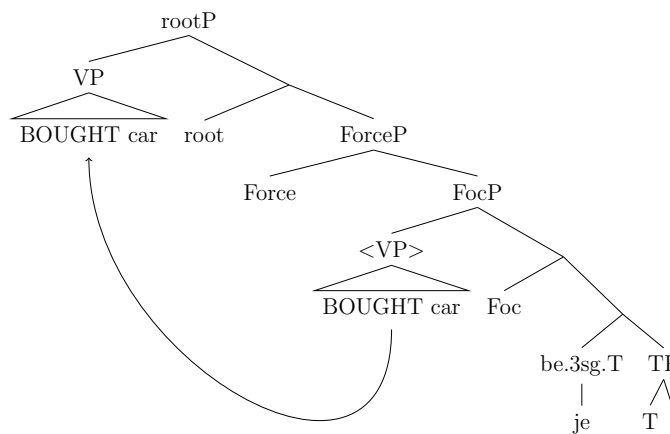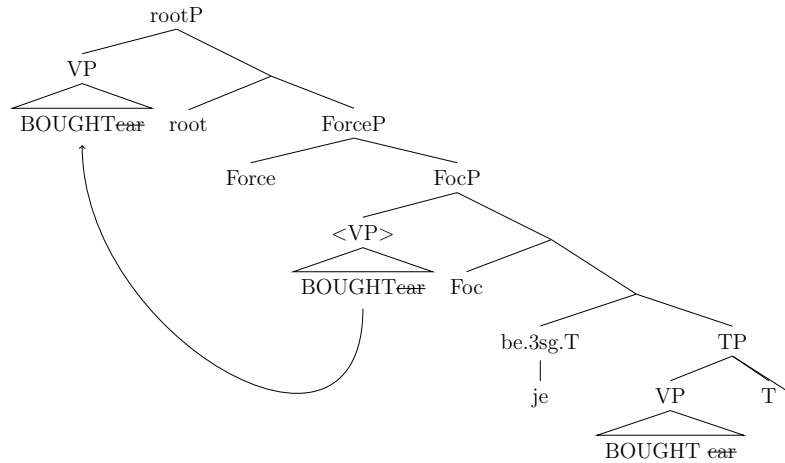
(76)

```
                    ForceP
              ┌───────┴────────┐
            Force             ToP
              │         ┌───────┴────────┐
            that       VP               
                   ┌────┴────┐   ┌───────┴────────┐
              bought car   Foc                    
                              ┌───────┴────────┐
                          be.3sg.T            TP
                              │              ╱╲
                             je             T
```

(77)

```
                    ForceP
              ┌───────┴────────┐
            Force             ToP
              │         ┌───────┴────────┐
            that       VP               
                   ┌────┴────┐   ┌───────┴────────┐
              bought ~~car~~  Foc                  
                              ┌───────┴────────┐
                          be.3sg.T            TP
                              │              ╱╲
                             je             T
```

The position of the unsplit topicalized VP as the highest, and closest XP to the root in the root clause is given in (78). The position of the topicalized VP remnant as the highest and the closest XP to the root clause is given in (79).

(78)

```
                         rootP
                  ┌────────┴─────────┐
                 VP                  
             ┌────┴────┐      ┌───────┴────────┐
         bought car  root              ForceP
                                 ┌───────┴────────┐
                               Force             ToP
                                          ┌───────┴────────┐
                                        <VP>               
                                    ┌────┴────┐    ┌───────┴────────┐
                               bought car   Foc                     
                                               ┌───────┴────────┐
                                           be.3sg.T            TP
                                               │              ╱╲
                                              je             T
```

60

(79)

```
                        rootP
                  ╱           ╲
              VP               ╲
           ╱  ╲            ╱         ╲
    bought ̶c̶a̶r̶  root    Force         ForceP
                      ╱            ╱      ╲
                           Force        ToP
                                     ╱       ╲
                                 <VP>         ╲
                              ╱    ╲       ╱      ╲
                       bought ̶c̶a̶r̶  Foc           ╲
                                        ╱      ╲
                                   be.3sg.T     TP
                                       │       ╱ ╲
                                       je     T
```

In the following subsection, I motivate the relative order of merge of TopP and FocP in the left periphery.

2.6.4 The merge order in the embedded left periphery

The original Rizzi [25]'s assumption, based on the Italian data is the merge order given in (80), where Focus is either preceded or followed by a recursive Topic projection.

(80)   Force> ...(Top)..Foc..(Top)..>Fin

Based on the distribution in the non-root clause, I show that both Top>Foc and Foc>Top merge orders are available in a Croatian non-root clause. The empirical support for the Top>Foc order is given in (81), and the support for the Foc>Top order is given in (82).

Context: You say that Marko read an article on Orlinski to him, but that is incorrect.

(81)   On misli   da   Marko OVAJ članak mu   je   pročitao.
        he think.PRS.3SG that Marko this article he.DAT be.PRS.3SG read.PTCP.M.SG
        'He thinks that Marko read THIS article to him.'   (**Top>Foc**)

Context: You say that Marko read an article on Orlinski to him, but that is incorrect.

(82) On misli   da   OVAJ članak Marko mu   je   pročitao.
      he think.PRS.3SG that this   article Marko he.DAT be.PRS.3SG read.PTCP.M.SG
      'He thinks that Marko read THIS article to him.'   (**Foc>Top**)

Based on the above facts, where both Top>Foc and Foc>Top orders are allowed, I conclude that in Croatian, TopP c-commands FocP and Foc c-commands Top, which is consistent with Rizzi's analysis of the left periphery where Top recursively occurs on the each side of Foc, as shown in (83).

(83)

Given the fact that both focus and topic can co-occur in the left periphery, the final task is to show how these orders appear in the root clause.

2.6.5   Both focus and topic projections activated

The analysis in (83) predicts that when both topic and focus co-occur in a sentence the clitics can occur, linearly, in the '3rd position' in the root clause.
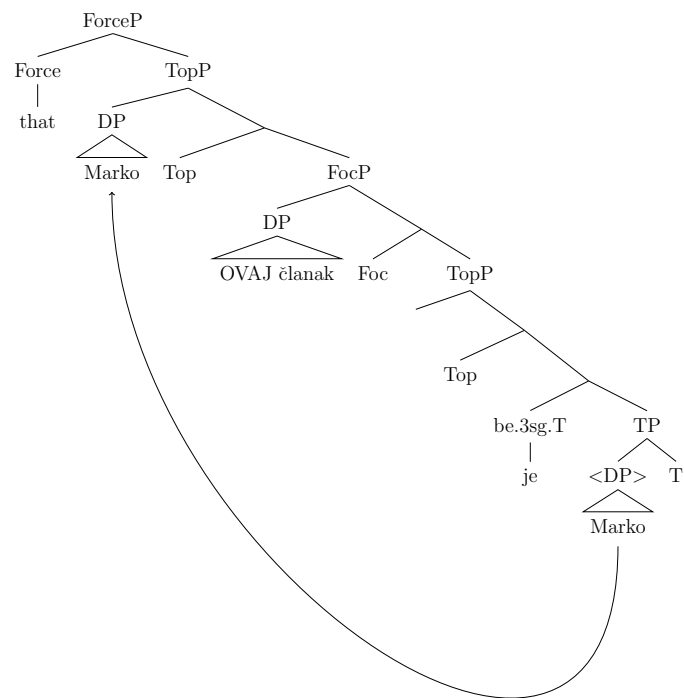
Top>Foc order. The data below show that in Top>Foc order, in addition to the clitics linearly occurring in the '3rd position' in the root clause, as in (84-c), the clitics can also occur in the 'second position' or the position immediately following the (subject) topic, as shown in (84-b). At first sight, the fact in (84-b) may be problematic, because the clitics should follow the left periphery and remain there and not move between topic and focus projection, as (84-b) seems to be suggesting.

(84) a. On misli   da   Marko OVAJ članak **mu**   **je**
          he think.PRS.3SG that Marko this   article he.DAT be.PRS.3SG
          pročitao.
          read.PTCP.M.SG
          'He thinks that Marko read THIS article to him.'

      b. Marko **mu**   **je**   OVAJ članak pročitao.
          Marko he.DAT be.PRS.3SG this   article read.PTCP.M.SG
          'Marko read THIS article to him.'

      c. Marko OVAJ članak **mu**   **je**   pročitao.
          Marko this   article he.DAT be.PRS.3SG read.PTCP.M.SG
          'Marko read THIS article to him.'

First, let us look at how the non-root datum in (84-a) is analysed. In (84-a), the subject topic is the highest XP in the clause. Given the analysis of the left periphery in (83), this means that the topicalized subject must be merged in the highest Top position immediately below Force, as shown in (85).

(85)

```
                    ForceP
                   /      \
              Force        TopP
                |         /    \
              that      DP      \
                       /\        \
                   Marko      Top    FocP
                              /    \
                           DP       \
                          /  \       \
                  OVAJ članak  Foc    TopP
                                     /    \
                                  Top      \
                                  /  \      \
                            be.3sg.T   TP
                               |       /  \
                              je   <DP>    T
                                   /\
                                Marko
```

In the root clause, the subject in the 'high' topic position is the closest XP to root, and it, consequently, moves to spec rootP, as shown in (86). *Je* remains in its original position, immediately following the left periphery. (86) derives the linear order in (84-c).

(86)

```
                    rootP
           ┌──────────┴──────────┐
          DP                    ┌─┴────────┐
        ──┴──                  root      ForceP
        Marko              ┌─────────┴─────────┐
                         Force                ToP
                                      ┌─────────┴─────────┐
                                    <DP>                 ┌─┴────────┐
                                   ──┴──               TopP       FocP
                                   Marko                     ┌──────┴──────┐
                                                            DP            ┌─┴──────┐
                                                         ──┴──          Foc      TopP
                                                       OVAJ članak           ┌────┴────┐
                                                                           Top       ┌─┴──────┐
                                                                                   AgrS      ┌─┴────┐
                                                                                    │     be.3sg.T  TP
                                                                                   mu       │    ┌──┴──┐
                                                                                            je <DP>   T
                                                                                              ──┴──
                                                                                              Marko
```
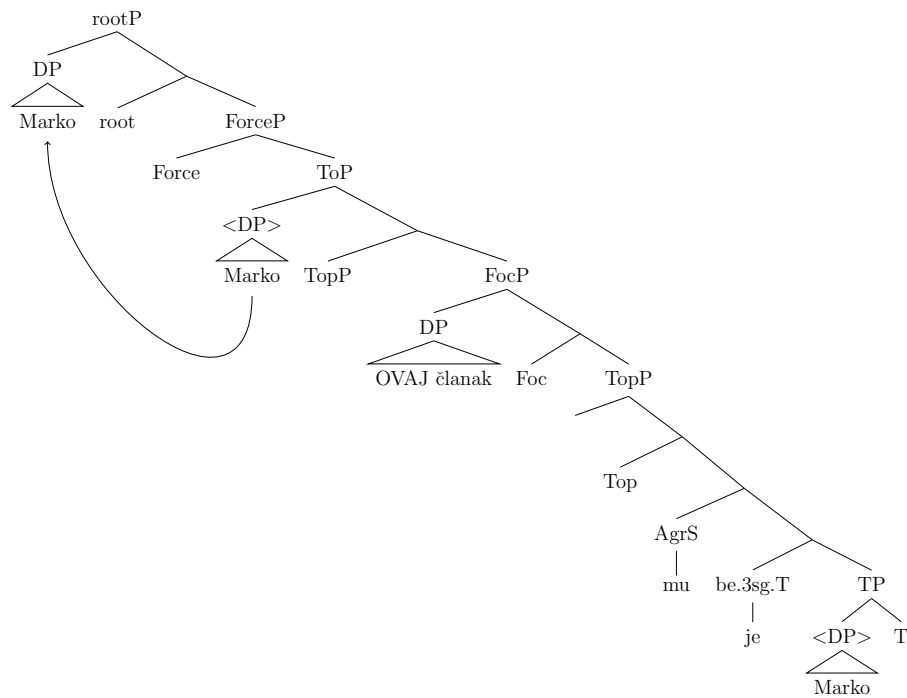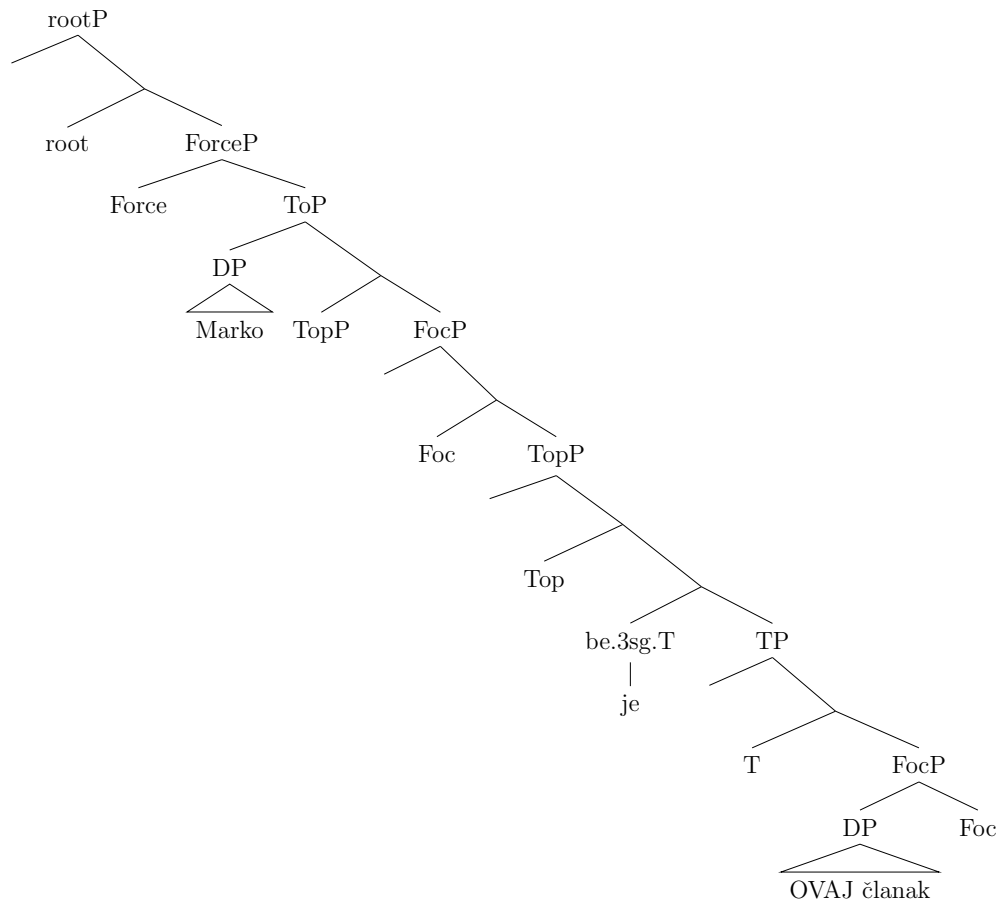
The question is how do we account for the order in (84-b), where the clitic occurs in between the topic and focus positions? A possibility is that what we are observing in (84-b) is a situation where the focused object following the clitics is in a focus position lower than the left periphery, whereas the topic is either in the high topic or the low topic position, as illustrated in (87). The assumption to have foci/topic positions lower than the left periphery is not controversial given Cardinaletti [29],Bianchi [30].

(87)

```
rootP
├── root
└── ForceP
    ├── Force
    └── ToP
        ├── DP
        │   └── Marko
        └── TopP
            ├── Top
            └── FocP
                ├── Foc
                └── TopP
                    ├── Top
                    │   └── be.3sg.T
                    │       └── je
                    └── TP
                        ├── T
                        └── FocP
                            ├── DP
                            │   └── OVAJ članak
                            └── Foc
```

How and where exactly does a low focus projection occur in Croatian is left for future research.

Foc>Top order. Next, I show how the Foc>Top order is derived in the root clause when both Focus and Topic projections are activated. The non-root order is given in (88-a). The root order datum is given in (88-b) and (88-c).

Context: You say that Marko read an article on Orlinski to him, but that is incorrect.

(88) a. On misli   da   OVAJ članak Marko **mu**   **je**
          he think.PRS.3SG that this   article Marko he.DAT be.PRS.3SG
          vjerojatno   pročitao.
          read.PTCP.M.SG
          'He thinks that Marko read THIS article to him.'

      b. OVAJ članak **mu**   **je**   Marko pročitao.
          this   article he.DAT be.PRS.3SG Marko read.PTCP.M.SG
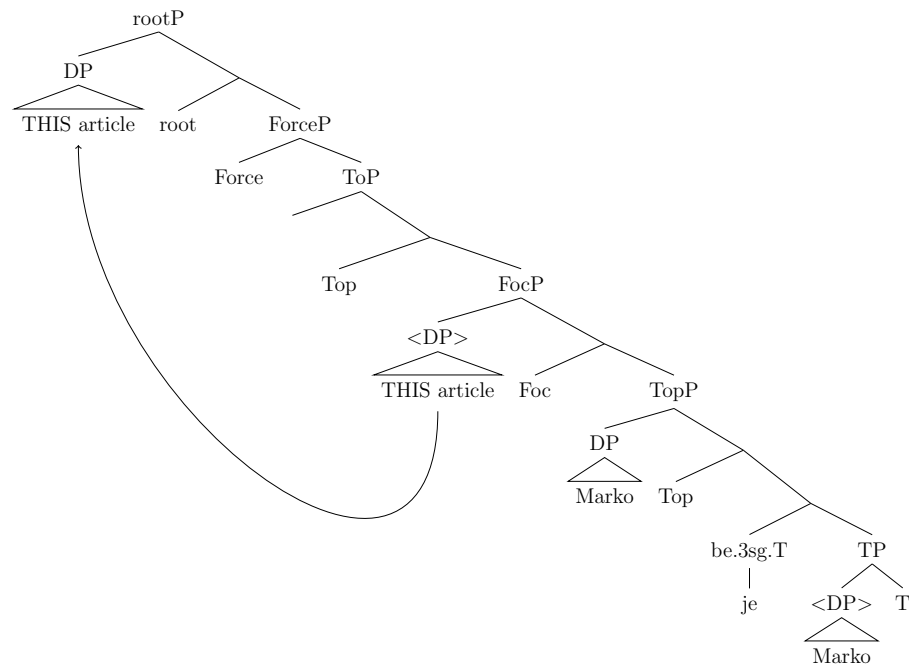   'Marko read THIS article to him.'

c. OVAJ članak Marko **mu** **je** pročitao.
    this article Marko he.DAT be.PRS.3SG read.PTCP.M.SG
    'Marko read THIS article to him.'

To have focus initial orders in the root clause, as in (88-b) and (88-c), the focused XP must have been the highest XP in the non-root clause, as given in (89).
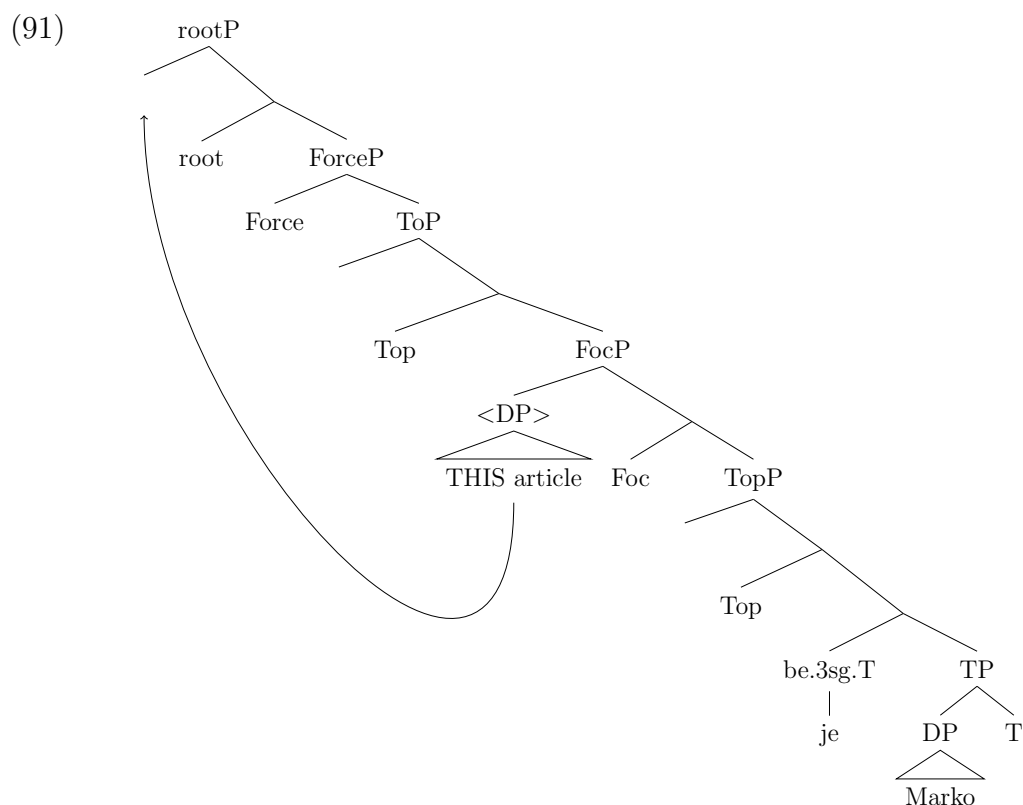
(89)

```
                    ForceP
                   /      \
               Force       ToP
                 |        /    \
               that     Top     FocP
                              /      \
                            DP        Foc    TopP
                          /    \            /    \
                   THIS article  Foc     DP       Top
                                        /  \            \
                                     Marko  Top      be.3sg.T      TP
                                                        |        /    \
                                                        je    <DP>     T
                                                             /    \
                                                          Marko
```
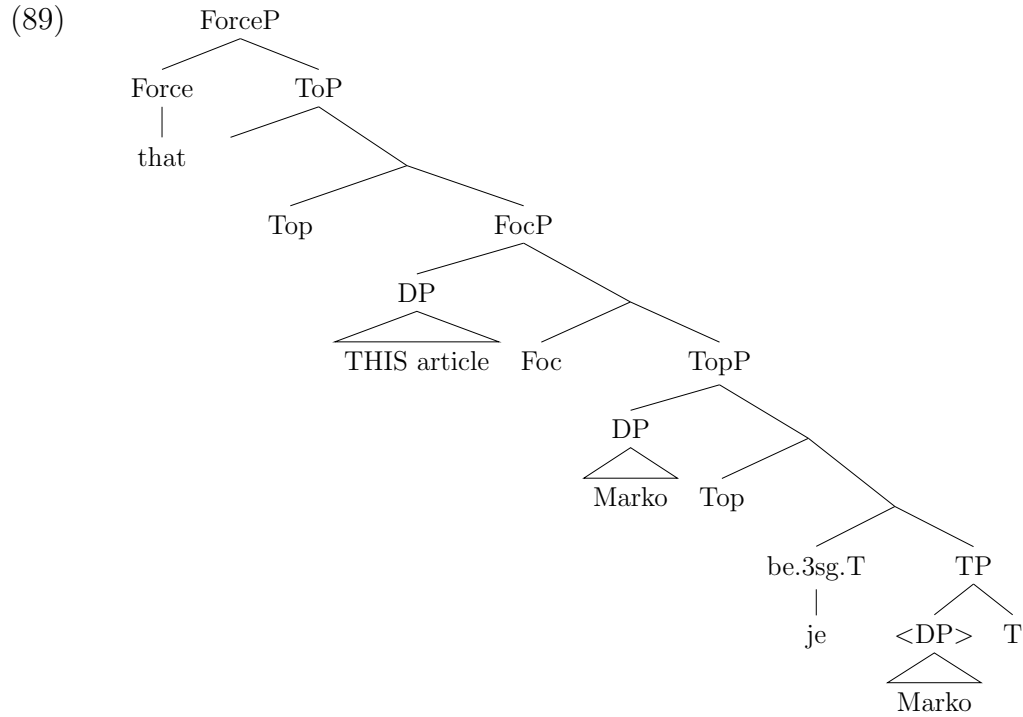
In the root clause, the XP in the spec FocP is the highest and the closest XP to root. Consequently, the focused XP moves to spec rootP, which derives the 'clitic third' effect in the root order, as in (88-c).

(90)

```
                    rootP
                   /     \
                 DP       \
               /    \      \
         THIS article  root   ForceP
                            /      \
                        Force       ToP
                                   /    \
                                 Top     FocP
                                        /    \
                                    <DP>      \
                                   /    \      \
                             THIS article  Foc   TopP
                                                /    \
                                              DP      \
                                            /    \     \
                                        Marko    Top    \
                                              /       \
                                        be.3sg.T       TP
                                            |         /   \
                                           je      <DP>    T
                                                   /   \
                                                 Marko
```

With the order in (88-b), we face the already familiar problem. The linear 'second' position appears to be derived by the clitic undergoing an additional step of movement from the clitic region following the left periphery. Again, this is problematic given the analysis where clitics remain in a fixed position in a clause.

Instead of assuming that clitics move up from the clitic region, we can account for the (88-b) by assuming that the subject remains either in spec TP or in some topic position lower than the left periphery. In (91), I show the subject in spec TP. Whether there is a topic position lower than the left periphery in Croatian is left to be determined in future research.

(91)

rootP
├── root
└── ForceP
    ├── Force
    └── ToP
        ├── Top
        └── FocP
            ├── <DP>
            │   └── THIS article
            └── Foc
                └── TopP
                    ├── Top
                    └── be.3sg.T
                        │   └── je
                        └── TP
                            ├── DP
                            │   └── Marko
                            └── T

In the following section, I focus on the clausal region below the left periphery.

2.7   *Je* and a clausal structure below the left periphery

In this section, I am primarily concerned with *je* in two syntactic environments: copular constructions and participial constructions. In section 2.7.1, I discuss the domain below the left periphery in a copular construction. In section 2.7.2 I discuss the domain below the left periphery with transitive participial constructions.

2.7.1   Copular sentences

Be, as standardly assumed since Stowell [31] combines with a small clause (AP, NP, PP, PartP). I depart from the Stowellian analysis by assuming that *be* does not directly Merge with the small clause, but a case position, KP, which attracts the subject of the small clause. I discuss the reason for such analysis in Chapter 3.

(92)

BeP
├── Be
└── KP
    ├── DP
    │   └── this article
    └── K
        └── AP
            ├── <DP>
            │   └── this article
            └── AP
                ├── DegP
                │   └── very/totally
                └── A
                    └── interesting
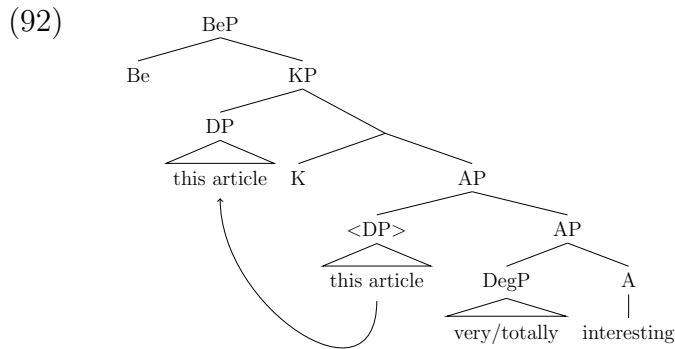
As I already mentioned in this Chapter, finite *be* raises through the positions in the spine, to end up in T, or in AgrS (if plural, or inflected for 1,2 person) (see chapter 2). *Je* is a third person form which is an enclitic in T, spelled out in the clitic region higher than spec TP. This is shown in (93).

(93)

AgrS
│
be(1,2);pl   3prs.sgT
             │
             je   TP
                  ├── T
                  │   └── Be   T
                  └── BeP
                      ├── <Be>
                      └── KP
                          ├── DP
                          │   └── this article
                          └── K
                              └── AP
                                  ├── <DP>
                                  │   └── this article
                                  └── AP
                                      ├── DegP
                                      │   └── very/totally
                                      └── A
                                          └── interesting
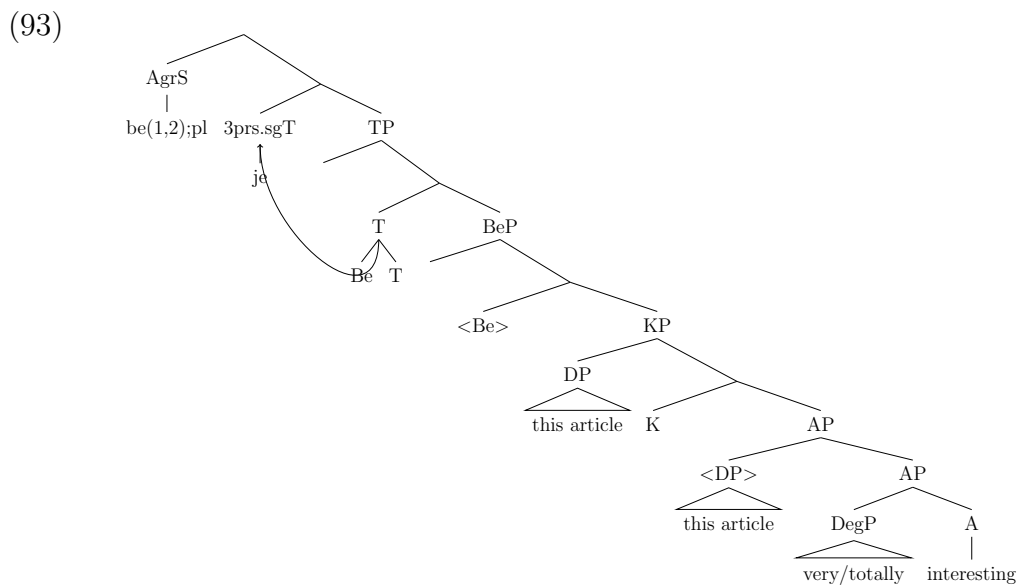
In addition to occurring as a copula, *je* also occurs in constructions involving participles, which I briefly turn to next.

2.7.2 Constructions with participles

Je occurs in present perfect and past perfect constructions, as shown in (94-a) and (94-b).

1. past tense formation, as shown in (94-a)

2. past perfect tense formation, as shown in (94-b)

(94)   a.   Ivica **je**   **kupio**   kuću.
              Ivica be. PRS.3SG buy.PTCP.M.SG house
              'John bough a/the house.'   (the past tense)

      b.   Ivica **je**   **bio**   **kupio**   kuću.
              Ivica be.PRS.3SG be.PTCP.M.SG buy.PTCP.M.SG house
              'John had bought a/the house.'   (the past perfect tense)

These constructions are important for the following reasons:

- they are a potential challenge to my claim that *je* is always in the same syntactic position (e.g. data from Boskovic [24]).

- they have been argued to involve complex predicate formation, which I claim plays an important role in the formation of remnants which prepose to a pre-clitic region

Next, I present the arguments and data from Boskovic [24] based on which he concluded that *je* can be spelled out in two positions: lower than TP and higher than TP. Since Boskovic [24]'s examples involve root clauses, this makes the structure opaque because of the XP first condition. Instead, I will discuss his data in the non-root environments.

2.7.2.1   Participles in the non-root clause

Assumption that *je* can be spelled-out lower than T is taken to be supported by the following data (Boskovic [24], Bošković [8]).

Boskovic [24] uses a semantically ambiguous adverb *pravilno*'correctly' as a diagnostic for how high *je* is in the structure with respect to the position of the participle. To illustrate, (95) and (96) show the data and judgments from Boskovic [24].

(95)   On **je**   **pravilno** odgovorio   Mileni.
         he be.PRS.3SG correctly answer.PTCP.M.SG Milena

'He did the right thing in answering Milena.' **(sentential)**

'They gave Milena a correct answer.' **(manner)**

(95) show the interpretation of an adverb *pravilno* 'correctly' in a position in which it precedes the participle. In this position, the adverb is ambiguous between a sentential and a manner interpretation (Bošković [8]).

Because *je* precedes the semantically ambiguous adverb is taken to suggest that *je* can be both higher than the sentential adverb (namely, spec TP) and higher than a manner adverb (namely, spec VP) (Bošković [8]).

When the participle precedes *je* and *pravilno*, as in (96-a) and (96-b), the adverb ambiguity disappears. Now, *pravilno* 'correctly' has only a manner interpretation (examples and data judgments from Bošković [8]). The sentential interpretation is not available.

(96) a. Odgovorio   **je**   pravilno Mileni.
          answer.PTCP.M.SG be.PRS.3SG correctly Milena
          'He answered Milena correctly.'   (manner)

          * 'They did the right thing in answering Milena.'   (sentential)

      b. On **je**   odgovorio   pravilno Mileni.
          he be.PRS.3SG answer.PTCP.M.SG correctly Milena
          'He answered Milena correctly.'   (manner)

          * 'They did the right thing in answering Milena.'   (sentential)

Based on the only manner interpretation availability, both (96-a) and (96-b) show that the participle cannot be positioned higher than the sentential adverb (contrary to Wilder and Ćavar [22], Franks and Progovac [6]).

As for the spell out position of *je*, (95) shows that *je* can be spelled out higher than T, and (96-a) shows that *je* can be spelled out below T.

Therefore, Boskovic [24]'s analysis goes against the analysis I proposed in this chapter regarding the spell out of *je*, which is always higher than T.

However, there are at least two aspects of Boskovic [24]'s argument that I find problem-

atic.

First, (96-a), for instance, has a *pro* subject. Since we cannot tell where *pro* is in the structure, it makes it harder to evaluate the position of the participle, and, consequently, *je*.

Second, as already mentioned, Boskovic [24] only discusses the root clauses. Since these clauses are much bigger than non-root clauses, we simply cannot tell where the elements in the sentence are, including the participle and the overt subject in (96-b). Consequently, we cannot asses whether the adverb ambiguity that we observe in the data is objectively correlating with the low/high position of the adverb or not.

Given the above concerns, it may be the case that the conclusions on the position of *je*/the participle based on (96-a) are simply not correct.

In the following subsection, I complete the paradigm by adding an overt definite subject and by comparing participle and *je* position with respect to the overt definite subject in a root and a non-root clause. I also control for the interpretation of the ambiguous adverb *pravilno* 'correctly'.

2.7.3   Novel data and the post-participle domain

As it will be shown shortly, adding a definite subject to a post-participle domain as in (97), affects the adverb interpretation and also provides a purely structural diagnostic of the position of the participle and *je*.

The data below are considered with respect to two orders. One includes the position of the subject w.r.t the adverb and the other includes the position of the subject w.r.t the indirect object.

The position of the subject w.r.t the adverb is not relevant for the interpretation of the adverb, since both adverb interpretations are available when the subject follows or precedes the adverb, as seen in (98-b)&(97-a).

The position of the subject w.r.t the indirect object becomes relevant for the interpretation of the adverb. What we see in this case is that only a manner interpretation is available

when the subject follows the indirect object (e.g. (99-b)).

(97)   a.   da   je odgovorio ovaj student pravilno Mileni.
               that be answer   this student correctly Milena
               'This student answered Milena correctly.'   (manner)

               'This student did the right thing in answering Milena.'   (sentential)

   b.   Odgovorio   je   ovaj student pravilno Mileni.
               answer.PTCP.M.SG be.PRS.3SG this student correctly Milena
               'This student answered Milena correctly.'   (manner)

               *'This student did the right thing in answering Milena.'   (sentential)

(98)   a.   da   je odgovorio pravilno ovaj student Mileni.
               that be answer   correctly this student Milena
               'This student answered Milena correctly.'   (manner)

               'This student did the right thing in answering Milena.'   (sentential)

   b.   Odgovorio   je   pravilno ovaj student Mileni.
               answer.PTCP.M.SG be.PRS.3SG correctly this student Milena
               'This student answered Milena correctly.'   (manner)

               'This student did the right thing in answering Milena.'   (sentential)

(99)   a.   da   je odgovorio Mileni pravilno ovaj student.
               that be answer   Milena correctly this student
               'This student answered Milena correctly.'   (manner)

               *'This student did the right thing in answering Milena.'   (sentential)

   b.   Odgovorio je Mileni pravilno ovaj student.
               answer   be Milena correctly this student
               'This student answered Milena correctly.'   (manner)

               *'This student did the right thing in answering Milena.'   (sentential)

Let us assume the data about the position of the subject w.r.t the indirect object show the position of a definite subject either in a spec TP or a spec VP. When the subject is following the dative object, as in (99-b), then it must be in a VP-internal position, given that only a manner interpretation of the adverb is available. Let us assume that when the subject precedes the dative object as in (98-b), then, given the availability of both manner and subject oriented interpretation, we can assume that the subject can be associated with

a higher, spec TP position. If the subject in (98-b) is compatible with a spec TP position, this means that the participle which precedes it, must be in a position higher than spec TP.

The same conclusion about the position of the participle is further supported by (100). In (100), *pravilno* occurs in a sentence both as a manner and as a subject oriented adverb. *Pravilno* in a position where it immediately follows *je* has a sentential-oriented interpretation, and *pravilno* in a position where it follows the definite subject has a manner interpretation.

We see that both *je* and the participle can linearly precede *pravilno* as a subject oriented adverb, suggesting that both must be in the left periphery.

(100)   Odgovorio   je,   pravilno, ovaj student pravilno Mileni.
         answer.PTCP.M.SG be.PRS.3SG correctly this student correctly Milena
         'This student did the right thing in answering Milena correctly.'

To summarize, in this section I showed new facts that support the analysis I propose in this chapter regarding the position of the spell out of *je* in the clause. A systematic investigation of participle initial orders with an overt definite subject shows two things: first, participles can prepose as high as the left periphery (i.e. higher than the definite subject in spec TP), and second, since *je* always precedes the participle in a non-root clause, it must be in the left periphery given the position of the participle w.r.t. the definite subject.

2.8   Conclusion

In this Chapter I have provided the background on clitics and the root/non-root clausal structure, and derived the 'second position' effect as a root phenomenon from the assumed structural properties of the root clause. The crucial structural property that distinguishes non-root from root clauses is existence of a root node in a root clause. When the root node is projected, the node has EPP and attracts any XP which is closest to it. The closest XP is always the highest XP in the non-root environment. This accounts for the fact that any type of XP can occur preceding the clitics in the root clause.

When the root node is lacking, the highest projected node will be a head containing a

complementizer. This accounts for the fact that in a neutral order clitics must follow the complementizer in the non-root environment.

CHAPTER 3

Predicate preposing

3.1 Introduction

In this chapter I provide a syntactic analysis of preposed predicates, both when they prepose as an uninterrupted constituent and when they are 'split'.

To derive the patterns, I start with the assumed structure of the root/non-root clause, as established in Chapter 2.

The analysis is developed by 'unpeeling' (i.e. undoing movements) 'top down'. First, I start with the non-root clause, and show the clitic region (as established in Chapter 2), and the position of the pre-verbal subject. Then I proceed to the root clause. The root clause has different syntactic properties due to the presence of a root node which requires instances of internal merge to satisfy the property of the root in the non-root clause (similar to root phenomenon in verb second languages). The two clauses are shown in a simplified manner in (1) and (2).

(1)

rootP
├── XP
└── root — ForceP
    └── Force — Clcomplex
        └── S/Pred T

(2)

ForceP
├── Force
│   └── that
└── Cl.complex
    └── S/Pred T

77
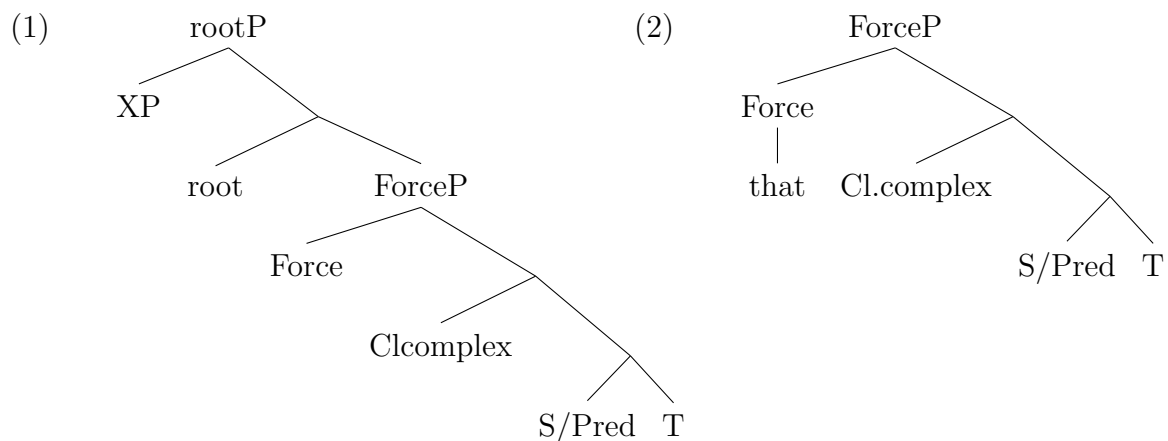
In the non-root clause, the clitic complex is realized immediately below *da*'that' and immediately preceding the subject. In the root clause, whichever constituent is such that in the non-root clause immediately follows clitics will be the closest XP to move to spec rootP. If such constituent is a subject, then a subject will occupy the 1st position in the root clause, and if it is a preposed predicate, then the predicate will occupy the '1st position' in the root clause.

3.2 Preposed modified and unmodified predicates

Croatian allows either the subject initial or the inverted predicate initial orders in a neutral discourse.

I assume that when predicates prepose and precede the subject they do so via predicate inversion (Moro [2]) and to spec TP.

I will start by showing a subject-predicate order in the root and the non-root clause with unmodified predicates first. Then, I show the predicate-subject orders in the same clausal environments. (3-a) shows the subject-predicate order in the non-root clause, and (3-b) shows the predicate-subject order in the non-root clause.

(3) a. On kaže   da **je**   ovaj članak zanimljiv.
        he say.PRS.3SG that be.PRS.3SG this article interesting
        'He said that this article is interesting.'

     b. da **je**   zanimljiv ovaj članak.
        that be.PRS.3SG interesting this article
        '... that this article is interesting.'

Next, I proceed to the root clause data. (4-a) is an example of a subject-predicate order and (4-b) is an example of a predicate-subject order.

(4) a. Ovaj članak **je**   zanimljiv.
        this article be.PRS.3SG interesting
        'This article is interesting.'

b. Zanimljiv **je** ovaj članak.
interesting be.PRS.3SG this article
'This article is interesting.'

Modified predicate data are considered next. (5-a) shows a subject predicate order in a non-root, and (5-b) shows the predicate subject order in a non-root clause.

(5) a. On misli da **je** ovaj članak vrlo/skroz zanimljiv.
he think.PRS.3SG that be.PRS.3SG this article very/totally interesting
'He thinks that this article is very/totally interesting.'

b. da **je** vrlo/skroz zanimljiv ovaj članak.
that be.PRS.3SG very/totally interesting this article
'He thinks that this article is very/totally interesting.'

'Splitting' in a non-root order is possible, but not as a discourse neutral, as shown in (6-a) and (6-b).

(6) a. On misli da OVAJ **je** članak vrlo/skroz zanimljiv.
he think.PRS.3SG that this be.PRS.3SG article very/totally important
'He thinks that THIS article is very/totally interesting.'

b. da VRLO/SKROZ **je** zanimljiv ovaj članak.
that very/totally be.PRS.3SG interesting this article
'that this article is VERY/TOTALLY interesting.'

Root clause data are considered next. (7-a) shows a subject-predicate order. With predicate-subject order, two orders are available: the unsplit pattern, given in (7-b) and the split pattern given in (7-c). I assume that the split pattern involves two steps of AP preposing. First, *zanimljiv* 'interesting' moves out of the AP on its own. Then, the remnant AP constituent which contains the degree modifier preposes to a pre-copular position. This analysis is given in (7-d).

(7) a. Ovaj članak **je** vrlo/skroz zanimljiv.
this article be very/totally interesting
'This article is very/totally interesting.'

b. Vrlo/skroz zanimljiv **je** ovaj članak.
   very/totally interesting be.PRS.3SG this article
   'This article is very/totally interesting.' (the unsplit pattern)

c. Vrlo/skroz **je** zanimljiv ovaj članak.
   very/totally be.PRS.3SG interesting this article
   'This article is very/totally interesting.' (the split pattern)

d. [Vrlo/skroz ~~zanimljiv~~] **je** zanimljiv ovaj članak.
   very/totally interesting be.PRS.3SG interesting this article
   'This article is very/totally interesting.'

Of particular analytical interest here are split predicates. I argue for a purely syntactic analysis of such cases (in agreement with e.g. Wilder and Ćavar [22], Bošković [8]).[1]

If split AP predicates can be resolved in syntax, the question is how a well motivated syntactic analysis of split predicates looks like.

Before I motivate one, I remind the reader of the established clausal hierarchy which is relevant for deriving the patterns of predicate preposing.

3.3 Functional sequence in the root/non-root environment

In the current section, I remind the reader of the established root and a non-root clausal structure (given in Chapter 2). I present the syntax of the clause starting from the topmost node in a non-root and a root clause, and working the way down the clausal spine. I start with the non-root clause first.

3.3.1 Functional sequence in a non-root clause

A schematic version of the non-root clause embedded under *da* 'that' is shown in (8). This clause type lacks a root node, and the highest projected node is Force. The clitic region is

---

[1]Recall that the most recent analysis of 'split' predicates is Diesing and Zec [1]'s analysis which involves lowering of the clitic/copula post-spell out into a first constituent to its right as shown in (i).

(i)   [je] [very/thoroughly+**je** zanimljiv] ...]

'sandwiched' between the position of a subject in spec TP and the complementizer in Force.

(8)

```
                        ForceP
                   /            \
              Force              \
                |            AgrS
              that        /       \
                    (1/2; pl)  su   ClP
                             /      \
                          dat        \        be.3sg.T      TP
                           |      acc  \         |         /    \
                          mu      |     \        je     DP       \
                                 ga    refl            /    \      T   AP
                                        |      preverbal subject       /\
                                       se                             ...
```
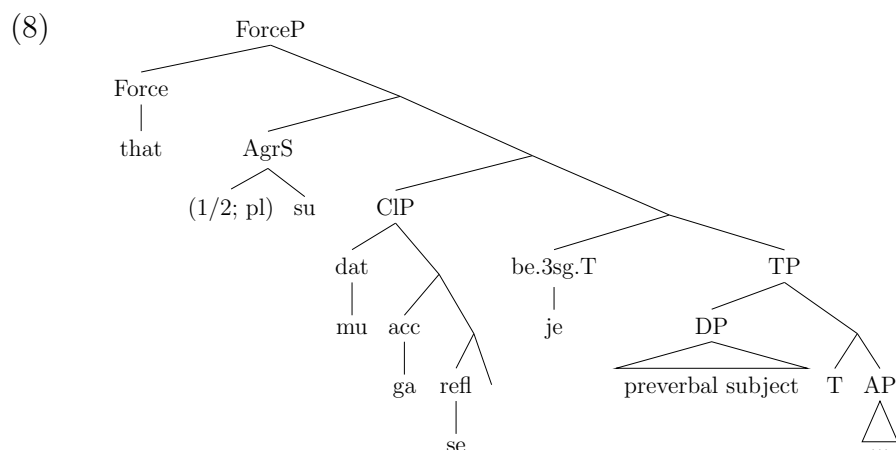
In (8), the highest XP is the subject, and in (9), the highest XP in the non-root clause is the predicate.

(9)

```
                        ForceP
                   /            \
              Force              \
                |            AgrS
              that         /       \
                    (1/2;pl)  su    ClP
                             /        \
                          dat          \       be.3sg.T       TP
                           |      acc    \        |          /    \
                          mu      |       \       je        AP      \
                                 ga     refl           /         \    T
                                         |      preposed predicate
                                        se
```
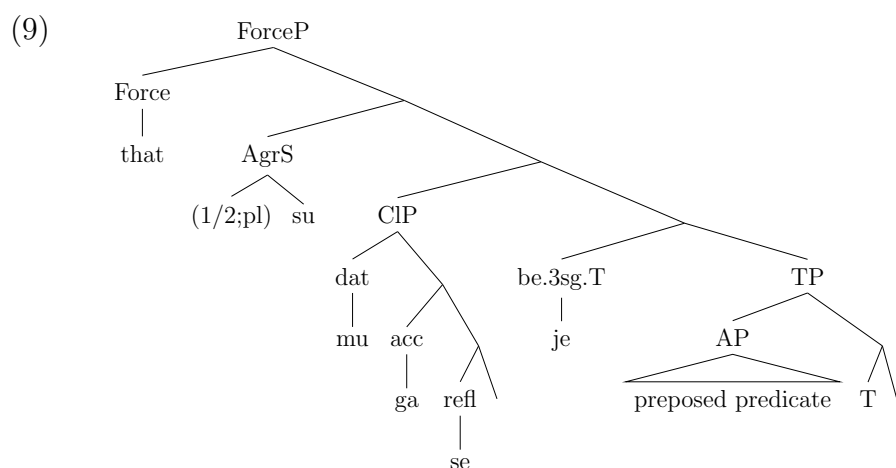
In the following subsection, I show the structure of the root clause.

3.3.2 Functional sequence in the root clause

The merger of the root node results in the structure in (10). Root requires a filled (eppXP), which is achieved via *Attract Closest*. The highest XP in the clause (the highest XP is always visible in the non-root clause) is attracted to spec rootP. The consequence of these assumptions is the fact that clitics never move. Instead, XPs move around them, producing

the linear 'second position' effect in the root clause.

(10)

```
                        rootP
                       /     \
                      /       \
                   XP          \
                  /   \         \
       attract closest  root   ForceP
                             /      \
                          Force      \
                                 AgrS  \
                                /   \   \
                            1/2/pl  su   ClP _____
                                       /   \                 \
                                    dat     \            be.3sg.T      TP
                                     |       \               |        /   \
                                    mu  acc   \              je      XP     \
                                         |     \                    /  \     \
                                        ga   refl      subject/object/predicate  T
                                              |
                                             se
```
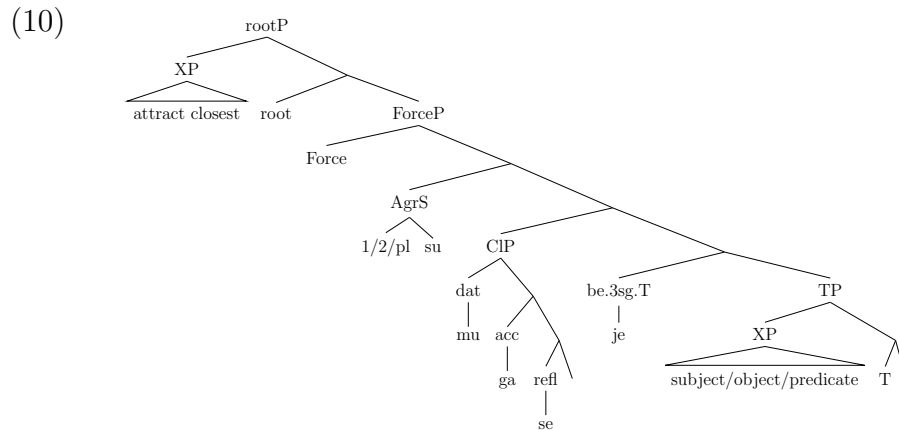
The property of the root node accounts for why XPs of different type can occur root clause initially, as shown in Chapter 2.

In the following section, I remind the reader of how the linear 'second position' effect is derived in the root/non-root clause depending on what constituent can occupy the '1st position'. The following section starts with the neutral orders.

3.4 Deriving the root/non-root orders

In what follows, I start with argument initial orders, followed by the predicate initial orders.

3.4.1 Argument initial order

Subjects. (11) shows the subject-predicate non-root order and (12) shows the subject-predicate root order. (11-a) and (12-a) show the subject in a copular construction and (11-b) and (12-b) show the subject in a transitive clause.

(11) a. On kaže   da   ovaj članak **je**   skroz zanimljiv.
          he say.PRS.3SG that this article be.PRS.3SG truly interesting
          'He says that this article is truly interesting.'

      b. On kaže   da **je**   ovaj članak služio   Mari.
          he say.PRS.3SG that be.PRS.3SG this article serve.PTCP.M.SG Mara

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'He says that this article served Mara.'

(12) a. Ovaj članak **je**   skroz zanimljiv.
          this article be.PRS.3SG truly interesting
          'This article is truly interesting.'

     b. Ovaj članak **je**   služio   Mari.
          this article be.PRS.3SG serve.PTCP.F.SG Mara
          'This article serves Mara.'

I assume the subject originates in the small clause (or vP in the transitive clause) from where it raises to a higher position (i.e, spec TP). In the tree in (13) I show the subject in the raised (spec TP) position. The subject in spec TP is the highest XP in the non-root clause.

(13)
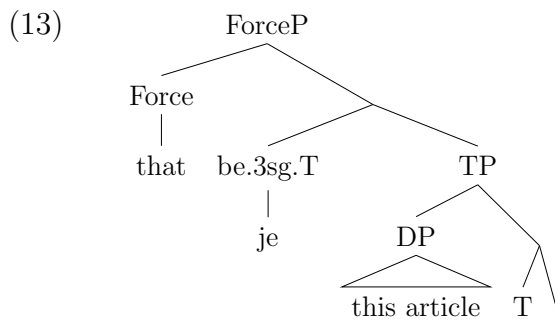
Due to a property of the root clause, the subject, as the closest XP to root in a root clause is attracted to spec rootP, as shown in (14).

(14)

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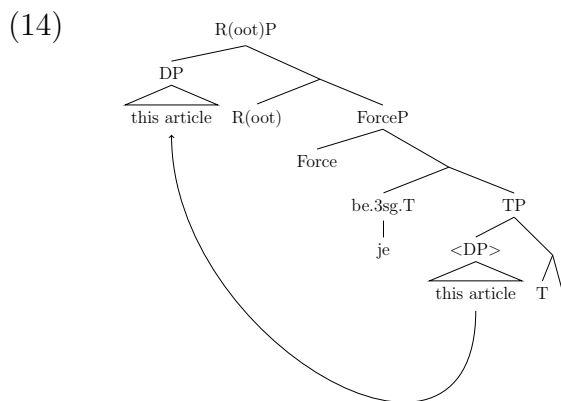
3.4.2 Predicate initial orders

In this subsection I show predicate initial orders where a predicate is either a 'complete' VP/AP or a VP/AP remnant.

3.4.2.1 Object-subject orders

Let us consider a sentence where the initial element in a clause is, superficially, an object. (15-a) shows the subject-predicate non-root order. (15-b) shows the discourse neutral non-root order with an object-subject order and (15-c) shows the discourse neutral root object-initial order.

(15)   a.   On kaže   da je   Mara pročitala   članak.
           he   say.PRS.3SG that be.PRS.3SG article read.PTCP.F.SG Mara
           'He says that Mara read an/the article.'

        b.   da je   članak   pročitala   Mara.
           that be.PRS.3SG article.ACC.SG read.PTCP.F.SG Mara
           '..that Mara read the article.'

        c.   Članak   je   pročitala   Mara.
           article.ACC.SG be.PRS.3SG read.PTCP.F.SG Mara
           '...that Mara read the article.'

In the examples (15-b) and (15-c) above it looks as if the object preposes on its own, and moves across the subject. Since it has preposed higher than the subject, it becomes the highest element in a clause. This apparently explains the position of the object in the root (as the element in the 'first position') and the non-root clause (as the first element following *je*).

Let us look closer at the apparent object movement in the data above. For convenience, in (16-a) I give the subject initial root clause order. Suppose the object in (15-b) and (15-c) moved on its own. If we allow this, then we inevitably change the discourse effect associated with the object-subject-verb order, as shown in (16-b) where the subject following the object must be contrastively focused. In other words, an order with an object in a pre-subject

position is not fine as a discourse neutral order, as indicated in (16-c).

(16)   a.   Mara je   kupila   knjige.
            Mara be.PRS.3SG buy.PTCP.F.SG books.ACC.PL
            'Mara bought (the) books.'

       b.   Knjige   je   MARA kupila.
            books.ACC.PL be.PRS.3SG Mara   buy.PTCP.F.SG
            'MARA bought (the) books.'

       c.   *Knjige   je   Mara kupila.
            books.ACC.PL be.PRS.3SG Mara buy.PTCP.F.SG
            intended: 'Mara bought (the) books.'

Another problem with assuming that the object moves on its own is a violation of the minimal link condition (Chomsky [13]), given that the subject 'intervenes' in the attempted object movement to some position which precedes the subject, as schematically shown in (17)[2]:

(17)
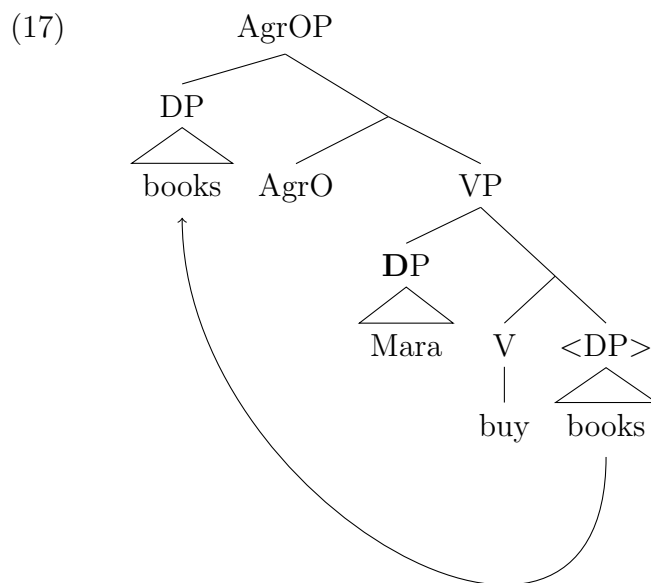
If we look back at (15-b) and (15-c), we notice that in order for the object to move, the

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[2]I assume that the object moves to some position higher than the subject in spec v/VP. The position is possibly spec AgrOP, but the exact location of a preposed object is not relevant at this point.

participle must also prepose to a position where it precedes the subject. The question is why. Analytically, what options are we observing in (15-c)? Is the subject moved to the right or the participle or is it the case that the entire VP is preposed and the object subextracted from within the preposed VP (a la Collins [32])?

Let us consider the latter hypothesis. The hypothesis recalls the 'smuggling' analysis of passives by Collins [32], where in order to derive the object-subject order without violating minimality, Collins [32] proposed that the object moves along with the verb after which it subextracts on its own. The 'smuggling' analysis is sketched in (18) and (19).(18) shows the object being 'smuggled' within a VP and across the subject. (19) shows that, once the object has been preposed as a part of a VP, it 'subextracts' on its own.

(18)   beP   (object 'smuggled' in a VP)

```
(18)                beP                        (object 'smuggled' in a VP)
              VP
          /   |  \
        V    DP    be        vP
        |    |            /      \
      read article    Mara       VP
                                /    \
                              V       DP
                              |        |
                            read    article
```

(19) AgrOP   (object subextracts)

      AgrO   AuxP

            VP   vP
                              be
        V   DP   Mara   <VP>
        | |
      read article   V   DP
                                 | |
                               read article
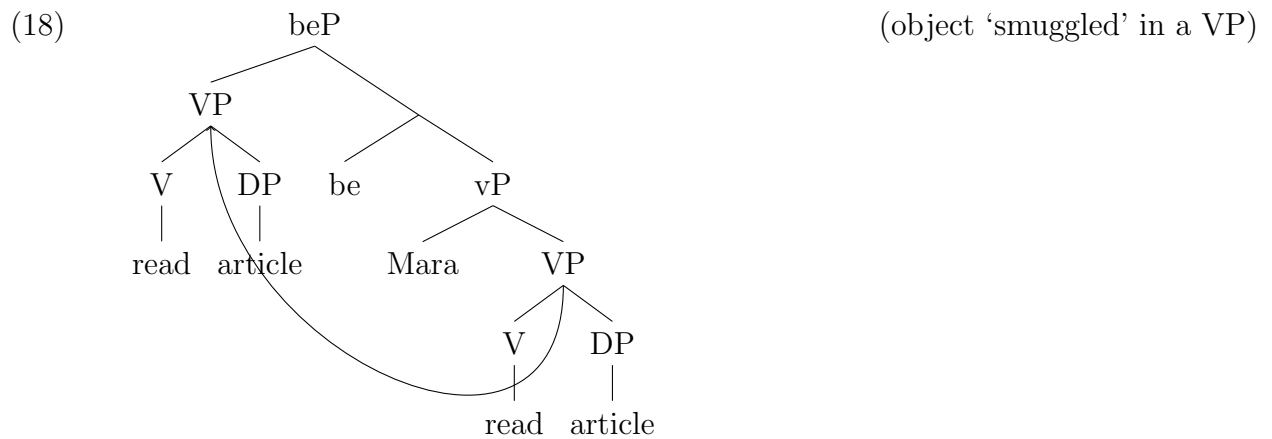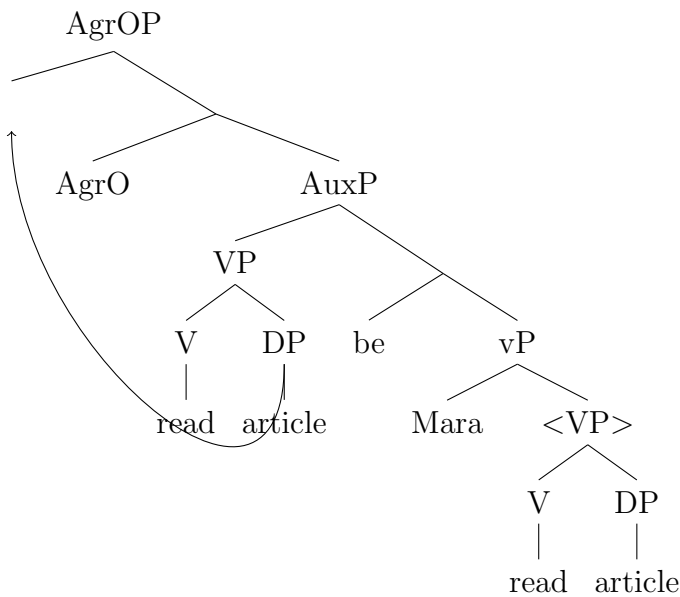
The tree in (20) shows that once the object subextracts, it becomes the closest XP to root and consequently moves to spec rootP. In spec rootP, the object is, linearly, in the '1st position'.

(20) rootP   (object in the '1st positon')

      root
           je   AgrOP

               DP
               article AgrO   AuxP

                              VP
                              V   DP   be   vP
                              | |
                            read article   Mara   <VP>

                                                V   DP
                                                | |
                                              read article
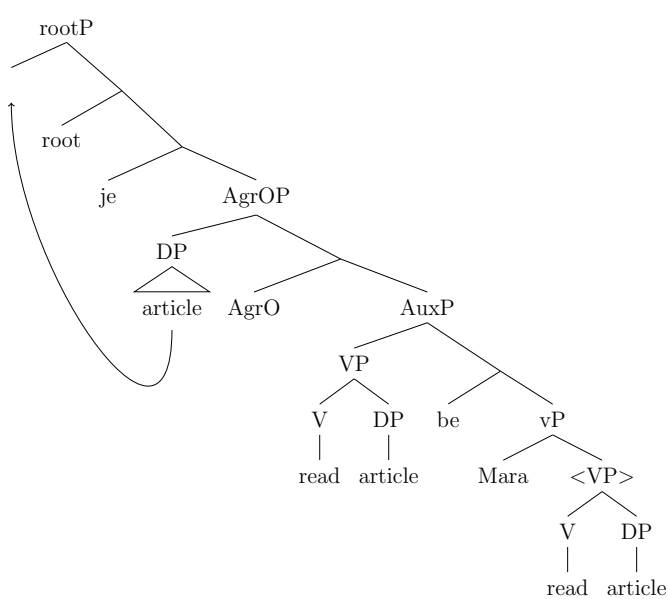
While this analysis correctly derives the simple cases as in mono-transitive participial clause, it makes wrong predictions regarding the more complex data, as with superficial object preposing in ditransitve constructions, which I turn to next.

Ditransitive constructions. The example in (21-a) is a subject initial ditransitive root clause. (21-b) shows the direct object separated from the VP and preposed to a clause initial position, and (21-c) shows an indirect object separated from the rest of the VP and preposed to a clause-initial position.

(21) a. Mara je dala knjigu Lovri.
          Mara be give book   Lovro
          'Mara gave a/the book to Lovro.'

      b. *Knjigu   je dala   Lovri   Mara.
          book.ACC be give.PTCP.F.SG Lovro.DAT Mara
          intended: 'Mara gave the/a book to Lovro.'

      c. *Lovri   je   knjigu   dala   Mara.
          Lovro.DAT be.PRS.3SG book.ACC give.PTCP.F.SG Mara
          intended:'Mara gave the/a book to Lovro.'

The only correct neutral order is the one where both the indirect and the direct object must prepose, as shown in (22).

(22) Knjigu   Lovri   je   dala   Mara.
      book.ACC Lovro.DAT be.PRS.3SG give.PTCP.F.SG Mara
      'Mara gave the/a book to Lovro.'

What we deduce from the linear order in (21-b) and (21-c) is a separation of either a direct or an indirect object to a pre-clitic position, while the other object and the participle remain lower than the clitic, but preceding the subject. These orders are predicted to be good by the 'smuggling' analysis, contrary to fact. The 'smuggling' analysis of (21-b) is given in (23-a), and the 'smuggling' analysis of (21-c) is given in (23-b).

(23) a. *Knjigu   je [$_{VP}$~~knjigu~~   dala   Lovri]   Mara.
          book.ACC be give.PTCP.F.SG book.ACC Lovro.DAT Mara
          intended: 'Mara gave the/a book to Lovro.'

      b. *Lovri   je   [$_{VP}$knjigu dala   ~~Lovri~~] Mara.
          Lovro.DAT be.PRS.3SG book.ACC give.PTCP.F.SG Mara Lovro.DAT
          intended:'Mara gave the/a book to Lovro.'

The orders in (21-b) and (21-c) are, however, good as discourse marked orders.

(24)   a.   KNJIGU je dala   Lovri   Mara.
               book.ACC be give.PTCP.F.SG Lovro.DAT Mara
               'Mara gave the/a BOOK to Lovro (and not a pen).'

        b.   Lovri   je   KNJIGU dala   Mara.
               Lovro.DAT be.PRS.3SG book.ACC give.PTCP.F.SG Mara
               'Mara gave the/a BOOK to Lovro (and not a pen).'

I leave analysis of the focused orders for a future research.

The datum in (22) suggests the analysis where the participle first separates from the VP containing objects and the objects prepose as a part of the VP remnant to a clause initial position, as shown in (25).

(25)   [$_{VP}$Knjigu ~~dala~~   Lovri]   je   dala   Mara.
           book.ACC give.PTCP.F.SG Lovro.DAT be.PRS.3SG give.PTCP.F.SG Mara
           'Mara gave the/a book to Lovro.'

The question is when in the derivation does the participle vacate the VP? There are two possibilities: the participle subextracts from the VP either after the VP preposes to a pre-subject position or the participle moves out of a VP prior to VP remnant movement to a pre-subject position. The former possibility is given in (26-a), and the latter possibility is given in (26-b).

(26)   a.   [$_{VP}$Knjigu ~~dala~~   Lovri]   je   dala   [$_{VP}$knjigu
               book.ACC give.PTCP.F.SG Lovro.DAT be.PRS.3SG give.PTCP.F.SG book
               ~~dala~~   Lovri]   Mara.
               give.PTCP.F.SG Lovro.DAT Mara
               'Mara gave the/a book to Lovro.'

        b.   [$_{VP}$Knjigu ~~dala~~   Lovri]   je   dala   Mara.
               book.ACC give.PTCP.F.SG Lovro.DAT be.PRS.3SG give.PTCP.F.SG Mara
               'Mara gave the/a book to Lovro.'

For now, I will assume the analysis in (26-b), where, first, the participle preposes on its

own, followed by the remnant VP movement to a pre-clitic position. I leave motivating the analysis for further research.

To summarize, based on the ditransitive data, I conclude that when the object preposes, apparently on its own, it must prepose as a part of a VP remnant. I will informally refer to this analysis as a remnant movement analysis.

<u>Prepositional dative constructions</u>. The analysis is further supported with a prepositional dative construction. (27-a) shows a subject initial root clause containing the prepositional dative construction. (27-b) shows the only possible output in a neutral order regarding object preposing. The example shows that both objects must prepose along with the participle to a pre-subject position. Preposing one of the objects before *je*, but leaving the other lower is not possible as a neutral order in (27-c) and (27-d). Changing the order within a VP in a pre-subject position also does not produce a grammatical output as shown in (27-e) and (27-f).

The only grammatical output in a neutral order as in (27-b) is predicted by the 'remnant movement' analysis and not predicated by the 'smuggling' analysis.

(27)   a.   Mara je stavila kutiju na stol.
            Mara be put   box   on table
            'Mara put the box on the table.'

       b.   Kutiju na stol   je stavila Mara.
            box   on table be put   Mara
            'Mara put the box on the table.'

       c.   *Kutiju je stavila na stol   Mara.
            box   be put   on table Mara
            intended: 'Mara put the box on the table.'

       d.   *Na stol   je stavila kutiju Mara.
            on table be put   box   Mara
            intended: 'Mara put the box on the table.'

       e.   *Kutiju je na stol   stavila Mara.
            box   be on table put   Mara
            intended: 'Mara put the box on the table.'

       f.   *Na stol   je kutiju stavila Mara.
            on table be box   put   Mara

intended: 'Mara put the box on the table.'

Recall now the two analyses of object preposing data we entertained before: the remnant movement analysis and the smuggling analysis. The output in (27-b) is predicted by the remnant analysis and not by the smuggling analysis. The latter cannot derive *je* because it would presuppose the extraction of a non-constituent (i.e. two objects do not form a constituent). Additionally, the smuggling analysis also rules in the ungrammatical orders, such as (27-d) and (27-e). For this reason, I reject the smuggling analysis as a correct analysis for (27-b).

The ungrammatical neutral orders are good as focused orders as shown in (28). I leave the analysis of the focused orders for future research.

(28) a. KUTIJU je stavila na stol   Mara.
          box   be put   on table Mara
          'Mara put the BOX on the table (and not books).'

      b. Na STOL je stavila kutiju Mara.
          on table be put   box   Mara
          'Mara put the box on the TABLE (and not on the chair).'

      c. Kutiju je na STOL stavila Mara.
          box   be on table put   Mara
          'Mara put the box on the TABLE (and not on the chair).'

      d. Na stol   je KUTIJU stavila Mara.
          on table be box   put   Mara
          'Mara put the BOX on the table (and not the books).'

Returning to the mono-transitive clause, I will assume the remnant movement analysis to derive the object-subject order in (15-b): the participle preposes independently, followed by the remnant VP movement containing the direct object. The tree structure shows only the relevant portion of the derivation. (29) shows the non-root clause where the VP remnant containing the object is in spec TP, I assume via predicate inversion (Moro [2]).

(29)

ForceP

Force
|
that   be.3sg.T   TP
            |
            je   VP   T
                    V   DP
                    |
                  read   DP
                        article
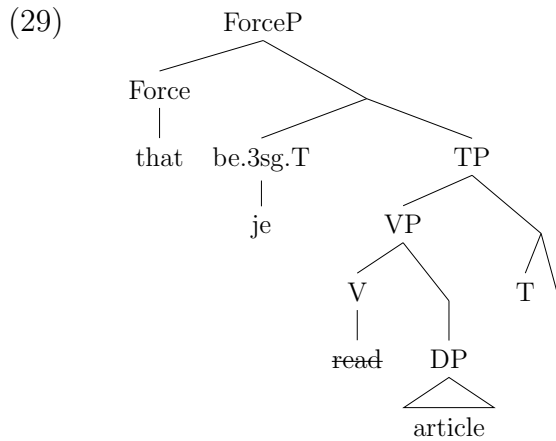
As the highest XP and the closest XP to root, the remnant, consequently, undergoes raising to spec rootP in a root clause as given in (30).

(30)

R(oot)P

VP
V   DP   R(oot)   ForceP
| |
read article   Force
                        be.3sg.T   TP
                            |
                            je   <VP>   T
                                    V   DP
                                    | |
                                  read article
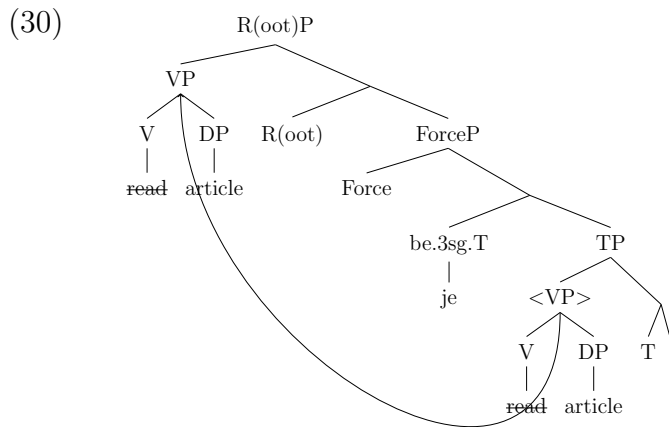
In (30) I assume the VP remnant preposes to spec TP. What evidence do we have for this analysis?

I will use a raising to subject diagnostic to test whether there is reason to assume that VP remnants prepose to spec TP.

First, I will show that 'complete' VPs raise. Consider for that matter, the example in (31-a) where the participle and the object are preposed before a subject and the clitic. When we embed (31-a) under a *da*'that' complementizer and under a raising predicate, such

as *činiti se* 'seem', we see that the entire VP can occupy the subject position of a raising predicate, which suggests that the entire VP has raised from the clause embedded under *da* 'that' to the matrix clause, as shown in (31-c).

(31) a. Pročitala   knjigu   je   Mara.
read.PTCP.F.SG book.ACC.SG be.PRS.3SG Mara
'Mara read a book.'

b. Pročitala   knjigu   mi   se   čini   da je
read.PTCP.F.SG book.ACC.SG me.DAT refl. seem.PRS.3SG that be.PRS.3SG
Mara.
Mara
'Mara seems to me to have read the book.'

c. [$_{VP}$Pročitala   knjigu]   mi   se   čini   da je
read.PTCP.F.SG book.ACC.SG me.DAT refl. seem.PRS.3SG that be.PRS.3SG
Mara[$_{VP}$~~procitala knjigu~~].
Mara   read.PTCP.F.SG book.ACC.SG
'Mara seems to me to have read the book.'

Now let us take a look at object mono and di-transitive initial root clauses, which I have shown must be analysed as VP remnants.

The example in (32-a) shows an object initial clause.(32-b) shows that *članak* 'article' in (32-a) has preposed from the embedded clause to the *seem* clause not as an argument but as a part of a VP remnant. (32-c) shows a clause with preposed direct and an indirect object. (32-d) shows that the two objects in (32-c) preposed as a part of a VP remnant.

VP remnant preposing which contains the two objects and the participle, which evacuates the VP, remains in the lower clause.

(32) a. Članak mi se čini da je   pročitala   Mara.
article me refl seem that be.PRS.3SG read.PTCP.F.SG Mara
'Mara seems to me to have read an/the article.'

b. [$_{VP}$~~Procitala~~ članak] mi   se čini da je   pročita1la
read   article me.DAT.CL refl seem that be.PRS.3SG read.PTCP.F.SG
Mara.
Mara
'Mara seems to me to have read an/the article.'

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c. Knjigu   Lovri   mi se cini   da je   dala
    book.ACC Lovro.DAT me refl seem.PRS.3SG that be.PRS.3SG give.PTCP.F.SG
    Mara.
    Mara
    'It seems to me that Mara gave a/the book to Lovro.'

d. [Knjigu   ~~dala~~   Lovri]   mi se čini   da je
    book.ACC give.PTCP.F.SG Lovro.DAT me refl seem.PRS.3SG that be.PRS.3SG
    dala   Mara.
    give.PTCP.F.SG Mara
    'It seems to me that Mara gave a/the book to Lovro.'

In the following section, I show that 'low' adverb-subject orders can be analysed as a remnant constituent as well.

3.4.2.2   Adverb subject orders

<u>Adverbs</u>. The highest XP in a non-root and a root clause can also be either a 'high' or a 'low' adverb. An example non-root and a root clause with a temporal (high) adverb as the highest XP in a clause is given in (33).

(33) a. da je   **danas** ovaj članak vrlo aktualan.
          that be.PRS.3SG today this article very relevant
          '... that this article is today very relevant.'

      b. **Danas** je   ovaj članak vrlo aktualan.
          today   be.PRS.3SG this article very relevant
          'This article is today very relevant.'

In Chapter 2 I assumed that the high adverb preposes from its external merge position (adjoined to TP) to spec rootP in the root clause, which derives high adverb initial root clauses. Here I wish to focus on the low/manner adverb-subject orders.

An example of a manner (low) adverb, superficially, as the highest XP in the non-root clause is given in (34-b). An example of a manner adverb as the XP in the '1st position' in the root clause is given in (34-c).(34) shows that the manner adverb can, in addition to preceding the subject (as in (34-b)), also follow it.

(34) a. Ne znam ako je   Mara dobro odradila   svoj posao.
          not know if   be.PRS.3SG Mara well   do.PTCP.F.SG her work
          'I don't know if Mara did her work well.'

     b. Ne znam ako je   **dobro** Mara odradila   svoj posao.
          not know if   be.PRS.3SG well   Mara do.PTCP.F.SG her work
          'I don't know if Mara did her work well.'

     c. **Dobro** je   Mara odradila   svoj posao.
          well   be.PRS.3SG Mara do.PRS.3SG self work
          'Mara did her job well.'

The question is what is the analysis of the adverb initial root clause as in (34-c). Does the adverb prepose on its own or does it prepose as a part of a remnant? In section 3.10, I show that *dobar*'well' has a low merge position, which I interpreted as an external merge position adjoined to the small clause. The analysis is shown in (35).

(35)
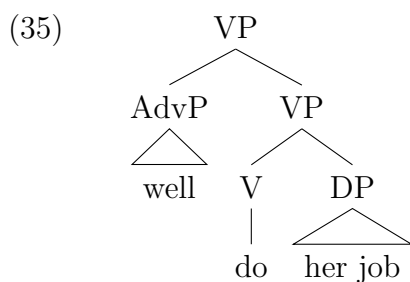
If the analysis is correct, this suggests the analysis where in (34-c) the participle and the object vacate the VP, followed by the adverb preposing as a part of the VP remnant to the spec rootP, as shown in (36).

(36) [Dobro ~~odradila svoj posao~~]   je   Mara odradila   svoj posao.
       well   do.PTCP.F.SG self work be.PRS.3SG Mara do.PTCP.F.SG self work
       'Mara did her job well.'

Is there independent evidence for this analysis, and can we make use of the ditranisitive data to show that *dobar*'well' preposes as a part of a VP remnant?

In ditransitive construction I discussed in the previous subsection I have established that the participle vacates the VP first, followed by remnant VP preposing to a pre-clitic position

in a root clause. If all other elements beside the participle which are contained in a VP prepose as a remnant, then we would expect that, first, the VP remnant which contains the objects preposes, followed by preposing of a VP remnant which has an adverb adjoined to it.

The assumed ditransitive VP structure is given in (37). (38) shows participle evacuating the VP first.

(37)
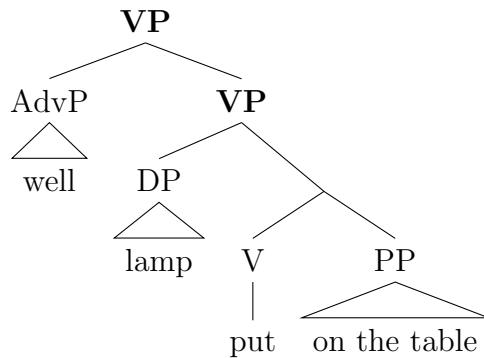
(38)
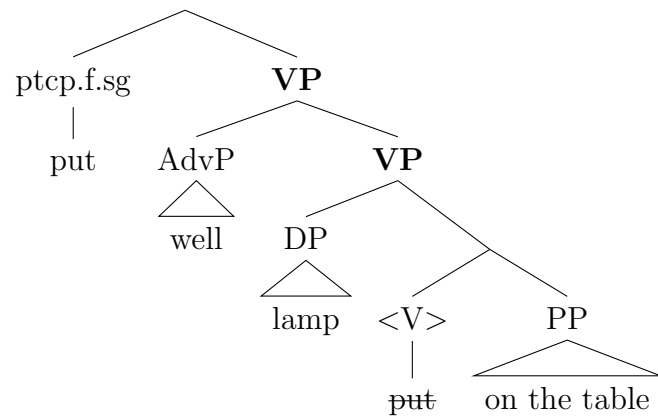
The tree in (39) shows the raising of the VP remnant that contains the two objects. This step occurs following the evacuation of the participle.

(39)
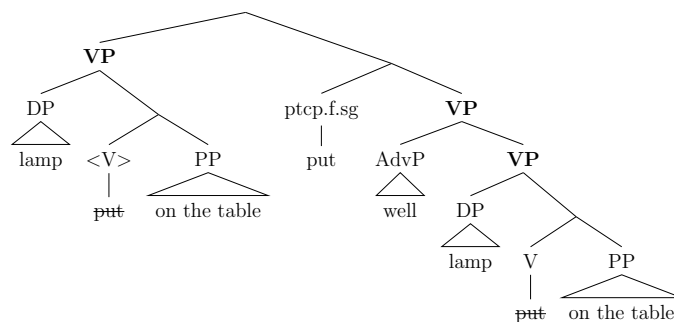
The tree in (40) shows the raising of a VP remnant that contains the manner adverb. This step occurs following the movement of a VP remnant which contains the manner adverb.

(40)

```
                              TP
               ┌───────────────┴───────────────┐
              VP                                ...
         ┌─────┴─────┐                     ┌────┴──────────────┐
       AdvP        <VP>                    T                   VP
        │       ┌───┴───┐            ┌──────────┬──────────────┐
       well    DP       │           VP       ptcp.f.sg        VP
               │     ┌──┴──┐    ┌────┼───┐       │        ┌────┴────┐
              lamp   V    PP   DP  <V>  PP      put      AdvP       VP
                     │    │    │    │    │                │    ┌────┴────┐
                    put  on   lamp put  on              well  DP    ...
                         the       the  the                   │
                         table     table table              lamp  V      PP
                                                                   │      │
                                                                  put   on the table
```

(AdvP well; DP lamp; V put; PP on the table; DP lamp; <V> put; PP on the table; ptcp.f.sg put; AdvP well; DP lamp; V put; PP on the table)
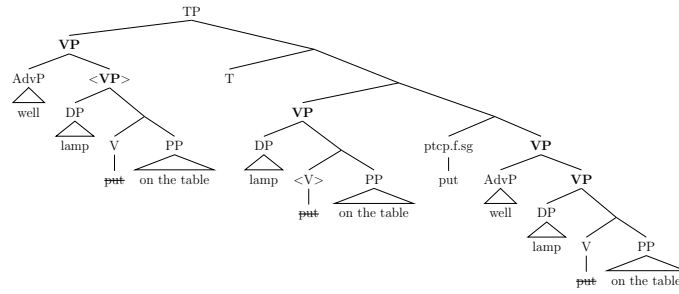
The analysis where the manner adverb preposes as a part of a VP remnant is supported by the following ditransitive data in the root clause. (41-a) shows the subject initial root clause and (41-b) shows the only available discourse neutral option with an adverb initial sentence. (41-b) is the exact output that the remnant analysis shown previously would predict.

(41)   a.   Mara je nježno lampu stavila na stol.
            Mara be gently lamp   put   on table
            'Mara put the lamp gently on the table.'

       b.   Nježno je lampu na stol   stavila Mara.
            gently be lamp   on table put   Mara
            'Mara put the lamp gently on the table.'

       c.   ???Nježno je stavila lampu na stol   Mara.
            gently   be put   lamp   on table Mara
            intended: 'Mara put the lamp gently on the table.'

The examples in (42) show other orders of preposing which involve the manner adverb but which which, based on my native speaker judgments, are not available as discourse neutral orders. They must be licensed by special discourse conditions. I leave determining these conditions for future research.

(42)   a. ??Lampu na stol   je nježno stavila Mara.
             lamp   on table be gently put   Mara
             intended: 'Mara put the lamp gently on the table.'

       b. ??Stavila je njezno lampu na stol   Mara.
             put   be gently lamp   on table Mara
             intended: 'Mara put the lamp gently on the table.'

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c. ??Lampu je na stol   njezno stavila Mara.
   lamp   be on table gently put   Mara
   intended: 'Mara put the lamp gently on the table.'

d. ??Na stol   je lampu njezno stavila Mara.
   on table be lamp   gently put   Mara
   intended: 'Mara put the lamp gently on the table.'

As shown in the previous section, VP remnants can occur as spec TP 'subjects', therefore I assume that the step of the derivation where the VP remnant containing the manner adverb is in spec TP in (40) is justified. Once in spec TP, the VP remnant containing the manner adverb becomes the highest XP in the clause[3]

The VP remnant which contains the manner adverb as the highest XP in a non-root clause is given in (43).

(43)
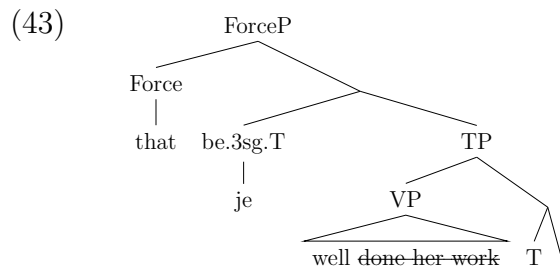
The VP remnant which contains the manner adverb as the highest XP in a root clause is given in (44).

---

[3]Raising across the *da*'that' clause boundary is fine with 'split' VPs that include a manner adverb, as shown in (i):

(i)   Nježno mi se   čini da   je lampu na stol   stavila Mara.
       gently me refl seem that be lamp   on table put   Mara
       'It seems to me that Mara gently put the lamp on the table.'

(44)
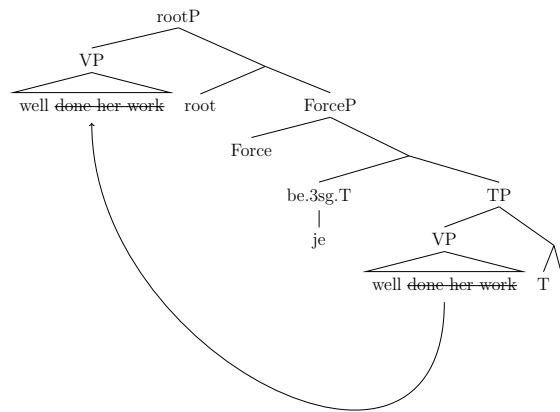
3.4.2.3 Participle-subject orders

Participles can also become the first element in a root clause, in which case, if they occur with an internal argument, they optionally pied-pipe it along to the root initial position. The example with a participle-subject order in the non-root clause is given in (45-b) and the examples of participle-subject orders in the root clause are given in (46-b) and (46-c). In (46-b), the participle pied-pipes the object along, and in (46-c), the object preposes independently from the participle contained in the remnant.

(45) a. On misli da je Mara kupila   knjige.
          he think that be Mara buy.PTCP.F.SG books
          'He thinks that Mara bought books.'

      b. da je kupila   knjige Mara.
          that be buy.PTCP.F.SG books Mara
          'that Mara bough books.'

(46) a. Mara je kupila   knjige.
          Mara be buy.PTCP.F.SG books
          'Mara bought books.'

      b. Kupila   knjige je Mara.
          buy.PTCP.F.SG books be Mara
          'Mara bought books.'

      c. [Kupila   ~~knjige~~] je knjige Mara.
          buy.PTCP.F.SG books be books Mara

'Mara bought books.'

I assume that (46-b) and (46-c) are completely parallel; the difference being that in (46-c) the object vacates the VP prior to VP preposing to spec rootP. I assume, as in the previous section, that the preposed VPs at some point in the derivation undergoes predicate inversion to spec TP.

In (46-b), the complete VP does so, and in (46-c) the VP remnant does.

Once in spec TP, the VP (complete or a remnant) is the highest XP in the non-root clause and the closest XP to root in the root clause. This is shown in (47), with 'complete' VP and in (48) with a remnant VP.

(47)

```
            ForceP
           /      \
      Force         \
        |            \
       that  be.3sg.T   TP
               |       /  \
              je     VP    \
                    /  \    \
              bought books  T
```

(48)

```
            ForceP
           /      \
      Force         \
        |            \
       that  be.3sg.T   TP
               |       /  \
              je     VP    \
                    /  \    \
              bought ~~books~~  T
```
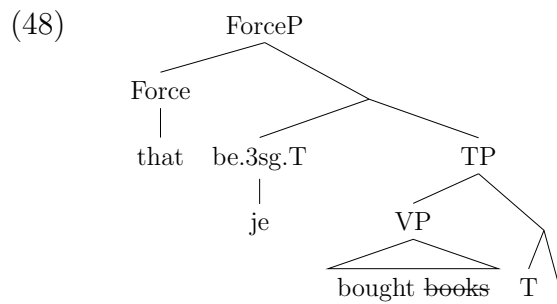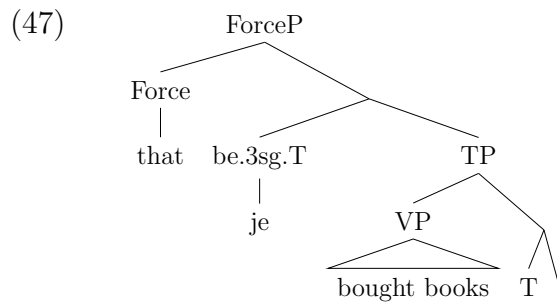
As the highest XP in the non-root clause, in (49) the 'complete' VP undergoes movement to spec RootP.

(49)

```
                    rootP
               ┌──────┴────────┐
              VP              ┌─┴────────┐
         ┌────┴────┐        root      ForceP
    bought  books  root          ┌─────┴──────┐
                               Force      ┌────┴──────┐
                                       be.3sg.T        TP
                                          │        ┌────┴────┐
                                          je     <VP>         T
                                               ┌───┴────┐
                                          bought  books
```
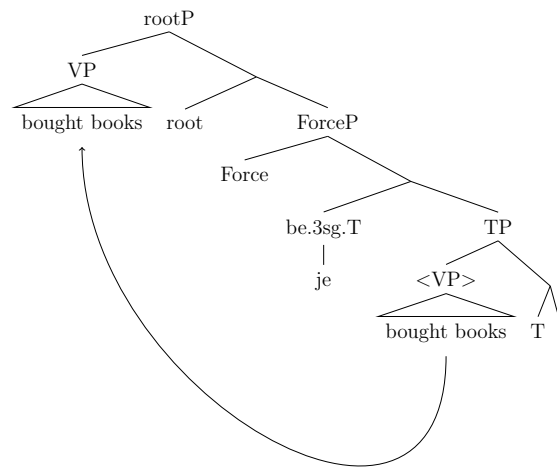
In (50), the remnant VP ((50)) undergoes movement to spec RootP.

(50)

```
                    rootP
               ┌──────┴────────┐
              VP              ┌─┴────────┐
         ┌────┴────┐        root      ForceP
    bought  ~~books~~  root      ┌─────┴──────┐
                               Force      ┌────┴──────┐
                                       be.3sg.T        TP
                                          │        ┌────┴────┐
                                          je     <VP>         T
                                               ┌───┴────┐
                                          bought  ~~books~~
```
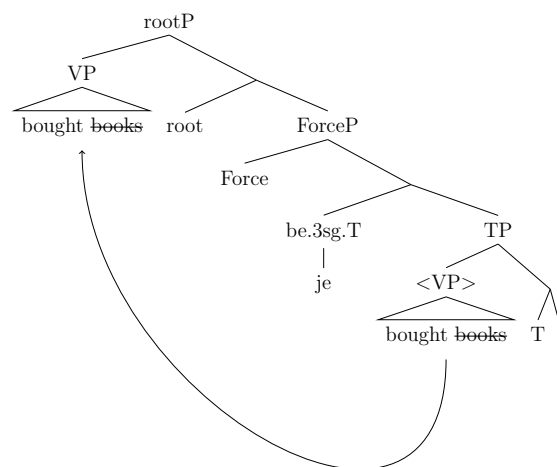
In the following subsection, I show preposed APs, which are the main topic of this chapter.

3.4.3 AP-subject orders

The example in (51-b) shows the AP predicate-subject non-root and (51-c) shows the AP predicate-subject root order.

(51) a. On kaze   da   ovaj članak **je**   skroz zanimljiv.
          he say.PRS.3SG that this article be.PRS.3SG truly interesting
          'He says that this article is truly interesting.'

      b. da   skroz zanimljiv **je**   ovaj članak.
          that truly interesting be.PRS.3SG this article
          '..that this article is truly interesting.'

      c. Skroz zanimljiv **je**   ovaj članak.
          truly interesting be.PRS.3SG this article
          'This article is truly interesting.'

The AP, I assume, which originates as a small clause predicate undergoes predicate inversion to spec TP. I motivate this further in section 3.9.4.

(52)
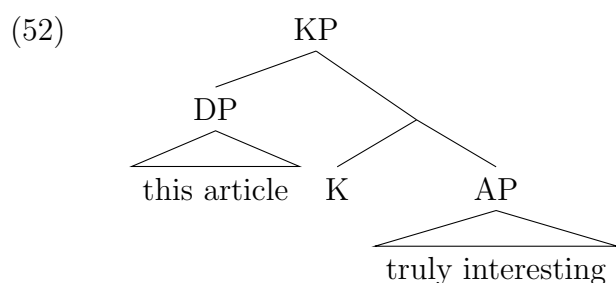
Once it undergoes predicate inversion, the AP predicate becomes the highest XP in a non-root clause. The relevant portion of the derivation is given in (53).

(53)
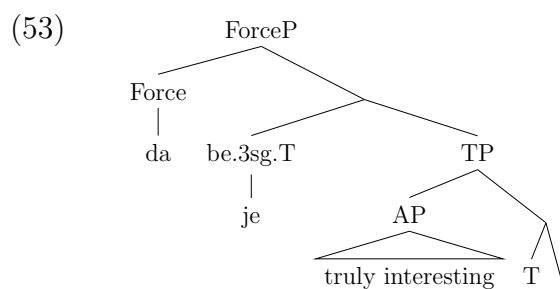
As the highest XP and the closest XP to root, the AP predicate, consequently, undergoes raising to spec rootP in a root clause as given in (54).

(54)
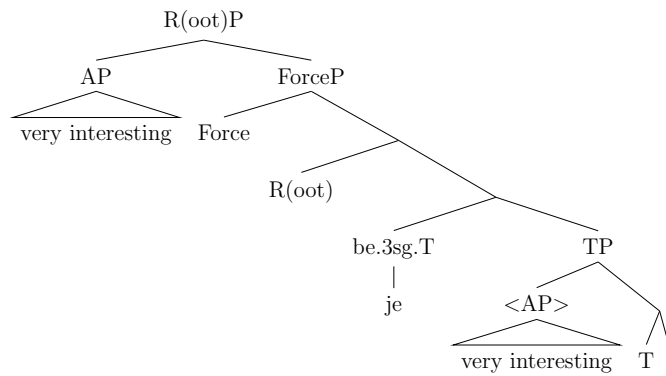
The following examples show the AP **predicate remnant** as the highest XPs in a clause. The example in (55-c) is completely parallel to a 'complete' AP predicate preposing, except for the fact that the adjectival head evacuates the AP prior to predicate inversion of the AP remnant (cf. (55-b) and (55-c)). The complete AP preposing is, for convenience, repeated in (55-b).

(55)   a.   da **je** vrlo zanimljiv ovaj članak.
            that be.PRS.3SG very interesting this article
            '..that this article is very interesting.'

       b.   Vrlo zanimljiv **je** ovaj članak.
            very interesting be this article
            'This article is very interesting.'

       c.   [Vrlo ~~zanimljiv~~] **je** zanimljiv ovaj članak.
            very interesting be.PRS.3SG interesting this article
            'This article is very interesting.'   **AP predicate remnant**

Once it undergoes predicate inversion, the AP remnant becomes the highest XP in a non-root clause. The relevant portion of the derivation is given in (56).

(56)
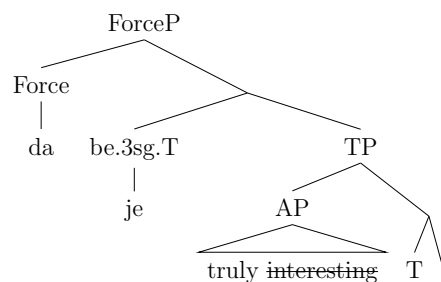
As the highest XP and the closest XP to root, the AP remnant, consequently, undergoes raising to spec rootP in a root clause as given in (57).

(57)

```
                    R(oot)P
          AP
     very  interesting   R(oot)      ForceP
                               Force
                                   be.3sg.T        TP
                                      |
                                      je      <AP>        
                                          very interesting   T
```
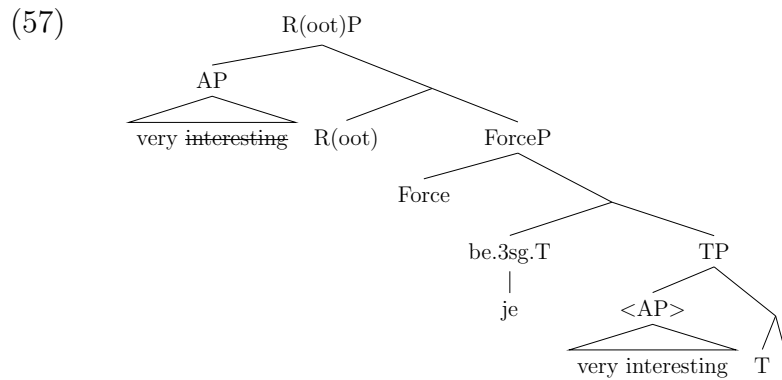
In the following subsection, I proceed to the non-neutral orders.

3.5 Discourse marked orders

In this subsection, I show how the activation of the focus projection, via internal merge of a focus feature bearing XP to spec FocP becomes the highest XP in a clause which ultimately undergoes movement to spec RootP in a root clause. The structure of the left periphery, as established in Chapter 2 is repeated for convenience in (58).

(58)

```
     ForceP
            ..
     Force    TopP
                  ..
            Top     FocP
                         ..
                  Foc     TopP
                               ..
                         Top    TP
                                  ..
```
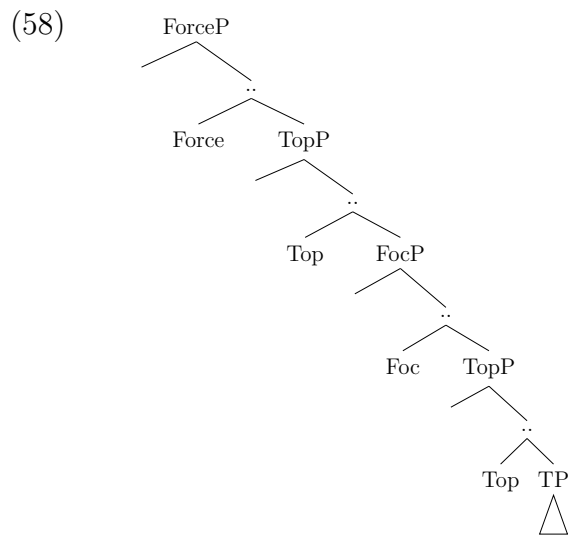
3.5.1 Focus initial order

The following data are object predicate orders, where the object is contrastively focused.
(59-a) shows the non-root and (59-b) the root order.

Context: You think Mara showed the article in *Glossa* on small clauses to John, but that
is incorrect.

(59)   a.   Mislim da   OVAJ članak mu   je   pokazala   Mara.
              think   that this   article him.DAT.SG be.PRS.3SG show.PTCP.F.SG Mara
              'I think Mara showed him THIS article (and not the one in Glossa).'

          b.   OVAJ članak mu   je   pokazala   Mara.
              this   article him.CL.DAT be.PRS.3SG show.PTCP.M.SG Mara
              'Mara showed him THIS article.'

The position of the focused object as the highest XP in the non-root clause is given in
(60). Given the analysis of object initial root clauses in section 3.4.2, I assume that the
object, even when focused, preposes as a part of a VP remnant.

(60)
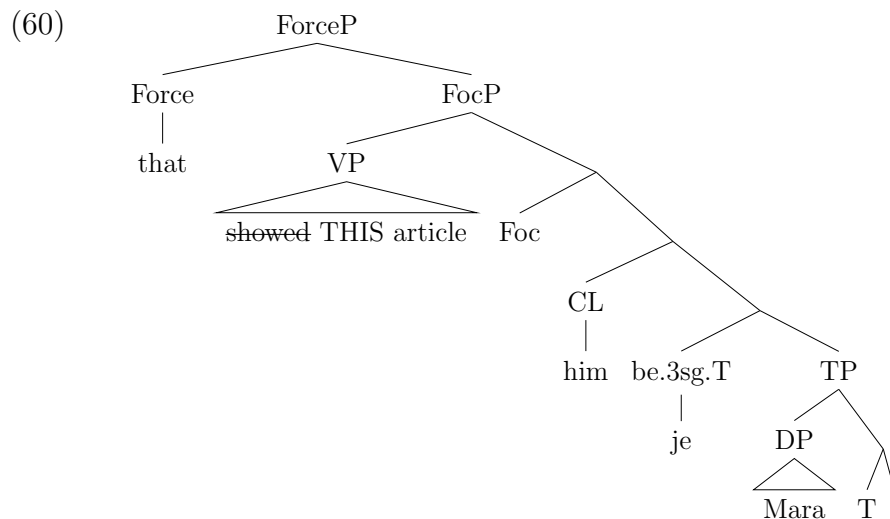
As the highest XP and the closest XP to root, the focused object, consequently, raises to
spec rootP, as shown in (61).

(61)

R(oot)P
- DP
  - THIS article
- R(oot)
- ForceP
  - Force
  - FocP
    - <DP>
      - THIS article
    - Foc
      - CL
        - him
        - be.3sg.T
          - je
      - TP
        - DP
          - Mara
        - T
        - AgrOP
          - <DP>
            - THIS article
          - Agr
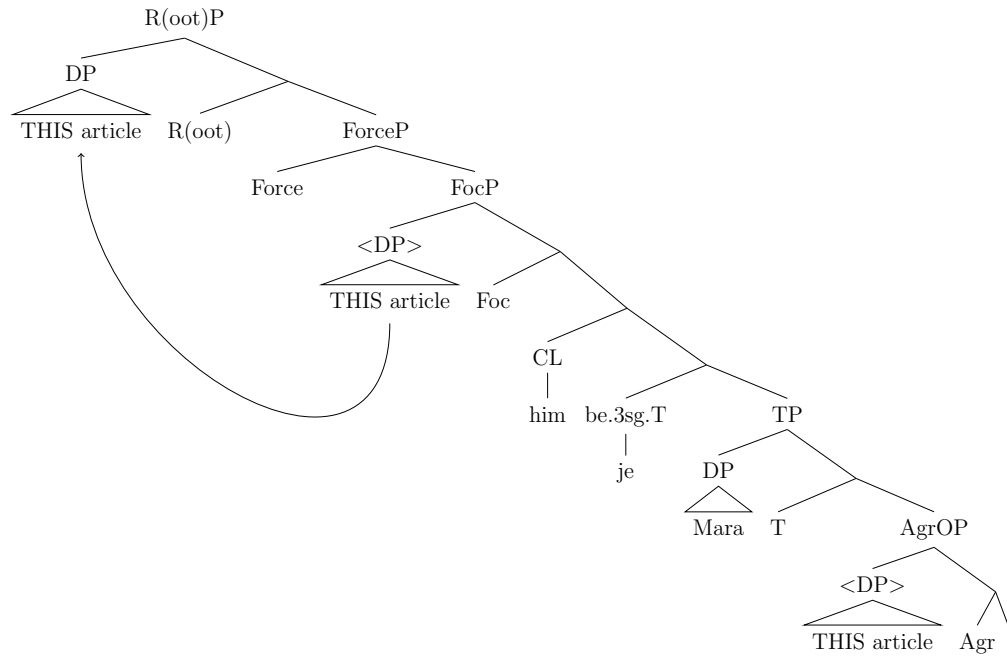
To summarize, section 3.4 showed how the structural properties of root and non-root clauses derive the 'second position' effect regarding the position of clitics. In the following section, I focus on the syntactic properties of (split) AP predicates.

My proposal is that 'split' APs be analysed as remnants, created in the course of a syntactic derivation. In the following section I present a novel datum which forces such analysis.

3.6   Raising to subject construction

In the preceding section, I assumed that inverted predicates occupy a canonical subject position, spec TP, which is a classic analysis of **predicate inversion** (Moro [2]). In this section I will provide arguments that neutral AP predicate-subject orders are, indeed, generated via predicate inversion to spec TP. Based on the evidence that VP predicates raise as canonical DP subjects (as shown in section 3.4) we can hypothesize that AP predicates also raise as canonical DP subjects.

I use *raising to subject construction* as a diagnostic to show that AP predicates, and AP predicate remnants displace via internal merge within and across a clausal boundary. Note

that it is not surprising for Croatian to allow raising out of a finite and a non-finite clause (see Stjepanović [21]).

3.6.1 Diagnostics for 'subjecthood'

In the following section, I use the idiom test to diagnose a raising verb in Croatian. I will test *postati*'to become', *izgledati*'to appear' and *početi* 'to start' in a construction with idioms.[4]

3.6.2 Idiom raising with *izgledati*'appear'

In what follows, I show that independent parts of a 'split' idiom undergo internal merge from the clause embedded under the raising predicate *izgledati*'appear' to the subject position of the predicate, which is taken to suggest that *izgledati*'appear' is a raising predicate.

I take the idiom *Batina je izašla iz raja*'lit. A beating stick came out from heaven', with the non-literal meaning 'to beat/treat someone harshly solves problems'.

(62) Batina   je   izašla   iz   raja.
      beating stick be.PRS.3SG come.PTCP.F.SG from heaven
      'A baeating stick came from heaven.'

When embedded under a raising predicate *izgledati*'to appear', the part of the idiom chunk selected by *izaći* 'came out' raises across the finite *da*'that' clause boundary into the *izgledati*

---

[4]The verb *početi* 'to start' differs from *postati*'become' and *izgledati*'appear' does not allow idiom chunks as subjects, although it allows subject DP raising, as shown in (i-c).

(i) a. *Jutro   **počinje**   pametnije od   večeri.
         morning start.PRS.3SG smarter   than evening
         intended: 'The morning starts smarter than the evening.'
     b. *Batina **počinje**   izlaziti iz   raja.
         beating stick begin.PRS.3SG come out from heaven
         intended: 'The beating stick starts to come out of heaven.'
     c. Mara počinje   pisati   dobre romane.
         Mara start.PRS.3SG write.INF good novels
         'Mara starts to write good novels.'

The idiom chunk test shows that *početi*'start' differs from the other two predicates. For these reasons, I will not use it as the raising predicate when diagnosing AP raising to spec TP.

'appear' clause. The non-literal meaning of the idiom is preserved. The result in (63) is expected if the piece of the idiom was displaced from the lower clause by internal merge.

(63)   Batina   izgleda da je   izašla   iz   raja.
       beating stick appear that be.PRS.3SG come.PTCP.F.SG from heaven
       'A beating stick appears to have come out from heaven.'

If *izgledati*'appear' is a raising verb, we expect, trivially, for DP subjects to be able to raise from under it. This is supported in (64-b), where the DP subject raises across a finite *da*'that' clause boundary to the subject position of the raising predicate.(64-a) shows the subject initial clause.

(64)   a.   Ovaj članak izgleda   da će   biti jako poznat.
            this article appear.PRS.3SG that will.FUT.3SG be.INF very famous
            'It appears that this article will be very famous.'

       b.   Ovaj članak izgleda   da će   biti [$_{SC}$ ~~ovaj članak~~ jako
            this article appear.PRS.3SG that will.FUT.3SG be.INF this article   very
            poznat].
            famous
            'It appears that this article will be very famous.'

I consider *postati*'become' next.

3.6.3   Idiom raising with *postati* 'become'

In what follows, I show that independent parts of a 'split' idiom undergo internal merge from the clause embedded under the raising predicate *postati*'become', which is taken to suggest that *postati*'become' is a raising predicate.

I take the idiom *Jutro je pametnije od večeri*'lit. Morning is smarter than evening', with the non-literal meaning 'it is better to sleep on a decision than make a hasty one'.

(65)   Jutro   je   pametnije od   večeri.
       morning be.PRS.3SG smarter   than evening
       'The morning is smarter than the evening.'

When embedded under a raising predicate *postati*'to become', the part of the idiom chunk selected by *pametnije* 'smarter' raises across the non-finite ((66-a)) and a finite *da*'that' clause boundary ((66-b)) to subject position of *postati* 'become'. The idiom retains the non-literal meaning.

(66) a. Jutro **postaje**   pametnije od   večeri.
          morning become.PRS.3SG smarter   than evening
          'The morning becomes smarter than the evening.'

      b. Jutro   postaje   da bude   pametnije od   veceri.
          morning become.PRS.3SG that be.COND.3SG smarter   than evening
          'The morning becomes smarter than the evening.'

The result in both (66-a) and (66-b) is expected if the idiom piece was displaced from the lower clause by internal merge in syntax.

If *postati*'become' is a raising predicate, we expect, trivially, for DP subject to raise from under the them, which is what is shown in (67-b).(67-a) shows the subject initial *postati*'become' clause.

(67) a. Ovaj članak **postaje**   biti vrlo/skroz zanimljiv.
          this article become.PRS.3SG be.INF very/totally interesting
          'This article starts to be very/ totally interesting.'

      b. Ovaj članak **postaje**   biti [$_{SC}$ovaj članak vrlo/skroz   zanimljiv].
          this article become.PRS.3SG be.INF this article   very/totally interesting
          'This article starts to be very/ totally interesting.'

3.6.4 A note on a dialectal difference between Serbian and Croatian

So far, I have shown that, with respect to idiom and subject raising Croatian allows raising across a finite *da*'that' (e.g. (64-b)) and a non-finite (e.g. (67-b)) clause boundary.

A well known fact is that Serbian and Croatian differ with respect to clitic climbing out of a *da*'that' clause (Stjepanović [21]).

The Serbian facts are given below. (68-b) shows clitic climbing from the embedded finite *da*'that' clause to the *morati*'have to' clause. (69-b) shows clitic raising from the embedded

da'that' clause to the matrix finite *željeti*'want' clause.

(68) a. Marija mora da   ga   posjeti.
          Mary   must that him.ACC.CL visit.PRS.3SG
          'Mary must visit him.'

      b. Marija ga   mora   da   ~~ga~~ posjeti.
          Mary   him.ACC.CL must.PRS.3SG that him visit.PRS.3SG
          'Mary must visit him.'   (Serbian)

(69) a. Marija želi   da   ga   posjeti.
          Mary   want.PRS.3SG that him.ACC.CL visit.PRS.3SG
          'Mary wants to visit him.'

      b. Marija ga   želi   da   ga posjeti.
          Mary   him.CL.ACC.CL want.PRS.3SG that him visit.PRS.3SG
          'Mary wants to visit him.'   (Serbian)

Clitic climbing across the finite *da*'that' clause boundary of the type illustrated in Serbian is not available in Croatian. Additionally, as it will be shown in what follows, remnant raising across the finite *da*'that' boundary is somewhat degraded. It is not known at this point why complete XPs (as, for instance, subject DPs) allow raising across the finite *da*'that' clause, whereas incomplete XPs do not. I leave this observation for future research.

Once I have established the raising predicates in Croatian, I proceed to diagnose raising to subject with AP predicates in the following section.

In this section, I will show that predicate 'splitting' must involve a remnant constituent raising created early in a syntactic derivation.

3.7   APs as subjects in spec TP

Let us start with a canonical DP subject raising. The example in (70-a) shows a subject initial sentence. (70-b) shows raising of the subject from its external merge position within the small clause to the subject position of the *postati*'become' clause.

(70)   a.   Ovaj članak postaje   biti   zanimljiv.
               this   article become.PRS.3SG be.INF interesting
               'This article becomes to be interesting.'

         b.   [Ovaj članak] postaje   biti   ~~ovaj članak~~ zanimljiv.
               this   article become.PRS.3SG be.INF this article   interesting
               'This article becomes to be interesting.'

Example in (71-a) shows a predicate initial sentence where the initial predicate is an **unmodified** AP. (71-b) shows raising of an AP predicate. I assume the AP moves from the external merge position as a predicate of a small clause (indicated in the linear order by the location of the copy) to the matrix clause subject position, passing through spec TP of the *biti* 'be' clause (as indicated by the copy).

(71)   a.   Zanimljiv postaje   biti   ovaj članak.
               interesting become.PRS.3SG be.INF this   article
               'This article becomes to be interesting.'

         b.   [Zanimljiv] postaje   ~~zanimljiv~~ biti   ovaj članak ~~zanimljiv~~.
               interesting become.PRS.3SG interesting be.INF this   article interesting
               'This article becomes to be interesting.'

The predicate can also occur as a clause initial element when the embedded clause is a finite *da* 'that' clause. (72-b) shows that the predicate can raise across a finite *da* 'that' clause, as shown in (72-a).

(72)   a.   Zanimljiv mi   se   čini   da postaje   biti   ovaj
               interesting me.CL.DAT refl. seem.PRS.3SG that become.PRS.3SG be.INF this
               članak.
               article
               'This article seems to me to become to be interesting.'

         b.   Zanimljiv mi   se   čini   da ~~zanimljiv~~ postaje
               interesting me.CL.DAT refl. seem.PRS.3SG that interesting become.PRS.3SG
               ovaj članak ~~zanimljiv~~.
               this   article interesting
               'This article seems to me to become interesting.'

I consider **modified** APs next. (73-a) shows a sentence with a modified AP as an initial

element. (73-b) shows a path of raising of the modified AP from the *biti*'be' clause to *postati*'become' clause.

(73) a. Vrlo/skroz zanimljiv postaje   biti   ovaj članak.
          very/totally interesting become.PRS.3SG be.INF this article
          'This article becomes to be very/totally interesting.'

      b. [Vrlo/skroz zanimljiv] postaje   ~~vrlo/skroz zanimljiv~~   biti   ovaj
          very/totally interesting become.PRS.3SG very/totally interesting be.INF this
          članak ~~vrlo/skroz zanimljiv~~.
          article very/totally interesting
          'This article becomes to be very/totally interesting.'

Modified APs can also raise across a finite *da*'that' clause boundary. (74-a) shows an AP initial clause where the embedded clause is a finite *da*'that' clause, and (74-b) shows the path of AP movement from the embedded clause to the matrix clause.

(74) a. Vrlo/skroz zanimljiv mi se čini da   postaje   ovaj članak.
          very/totally interesting me refl seem that become.PRS.3SG this article
          'This article seems to me to become very/totally interesting.'

      b. [Vrlo/skroz zanimljiv] mi   se čini   da
          very/totally interesting me.DAT.CL refl seem.PRS.3SG that
          ~~vrlo/skroz zanimljiv~~   postaje   ovaj članak ~~vrlo/skroz zanimljiv~~.
          very/totally interesting become.PRS.3SG this article very/totally interesting
          'This article seems to me to become very/totally interesting.'

Next, I show that leftmost parts of a predicate (i.e. modifiers) raise as a part of a remnant constituent.

3.7.1 Predicate remnant raising

Example in (75-a) shows a sentence where the initial element is the leftmost part of a predicate, i.e. the degree modifier. (76-b) shows that what underlies the surface form of the degree modifier in (75-a) is a remnant AP constituent from which the head of the AP has evacuated and remained in the embedded clause. The path of preposing of the remnant

constituent is the same as with the modified unsplit AP shown in (74-b).

(75)   a.   Vrlo/skroz   postaje   biti   zanimljiv ovaj clanak.
            very/totally become.PRS.3SG be.INF interesting this article
            'This article becomes to be very/totally interesting.'

       b.   [Vrlo/skroz ~~zanimljiv~~] postaje   ~~vrlo/skroz zanimljiv~~   biti
            very/totally interesting become.PRS.3SG very/totally interesting be.INF
            zanimljiv   ovaj članak ~~vrlo/skroz zanimljiv~~.
            interesting this article very/totally interesting
            'This article becomes to be very/totally interesting.'

As opposed to unsplit AP predicates, raising of an incomplete AP constituent containing the degree modifier across a finite *da*'that' boundary is not possible, as shown in (76-b)[5].

(76)   a. ??Skroz/vrlo mi   se   čini   da   postaje   zanimljiv
            totally/very me.DAT.SG refl appear.PRS.3SG that become.PRS.3SG interesting
            ovaj članak.
            this article
            'This article seems to become totally interesting.'

       b. ??[Skroz/vrlo ~~zanimljiv~~] mi   se   čini   da
            totally/very   interesting me.DAT.SG refl appear.PRS.3SG that
            postaje   zanimljiv   ovaj članak.
            become.PRS.3SG interesting this article
            'This article seems to become totally interesting.'

Nevertheless, (76-b) is important for the following reasons. First, it shows that AP 'splitting' can be done in the absence of clitics. Neither *postati*'become' or *biti*'be' are clitics. If the AP can be split independently of the presence of clitics, then we need not assume that 'splitting' in the presence of clitics is induced by something other than a syntactic derivation, such as their prosodic requirement.

    In the following section, I show how the post-syntactic analysis a la Diesing and Zec [1] fails to derive the correct output in the raising construction.

---

[5]I don't know why (76-b) is marginal, given that complete APs do raise across *da*'that' boundary. If the degree adverb also raises as an XP, then (76-b) should be also fully acceptable. I leave investigating properties of the incomplete (remnant) XP raising across *da* boundary for the future research.

3.7.1.1 'Split' predicates must be analysed in Syntax

The raising fact in (76-b) shows that 'splitting' must be analysed in Syntax and not PF (the prosodic component of the grammar).

For the sake of the argument, suppose we wanted to derive (75-a) at PF, by allowing the non-finite and non-clitic *biti*'be' to split an AP by 'lowering' into it. In a short presentation of a failed hypothetical derivation that follows the logic of Diesing and Zec [1]'s prosodically motivated post-syntactic analysis, I assume a standard Minimalist T-model of grammar (Chomsky [13]) and cyclic Spell-out(Chomsky [33]). The crucial assumption following the model is that once the output of the syntactic derivation has been shipped to the interfaces, the output of the Spell-out cannot re-enter the syntactic derivation. Assuming cyclic Spell-out means that there is not a single point of a phonetic Spell-out in a derivation; instead, the Spell-out proceeds incrementally, such that the Spell-out of the embedded clause can occur prior to a Spell-out of the entire clause (Chomsky [33]). I will further assume that a TP is a phase. The movement from a lower phase to a higher one is possible only via a phase edge (Chomsky [33]).

Let us assume for the sake of the argument that *biti*'be' and *postati*'become' are subject to a post-syntactic prosodically conditioned lowering. Accordingly, the two lexical verbs split the AP by lowering into it and attaching to the degree modifier following the completion of a syntactic derivation.

Let us consider a hypothetical derivation with *biti*'be' lowering first.

Suppose *biti*'be' is c-commanding the AP at the end of the syntactic derivation of the embedded clause, as schematically shown in (77-a). Suppose that once the derivation is shipped to the interfaces, 'be' 'lowers' into the AP, schematically shown in (77-b) and attaches to *very*, as shown in (77-b).

(77) a. [be [[very interesting] [this article]]]

   b. [~~be~~ [[very+**be** interesting] [this article]]]

Once the syntactic derivation of the matrix clause begins, the internal merge from the embedded TP phase to the matrix clause becomes unavailable because the entire embedded TP has already been shipped to the interfaces, which is where the 'lowering' of 'be' into *very interesting* occurs. The constituent at the edge of the TP phase, namely *very+be interesting* is spelled out in the embedded clause, and cannot re-enter the cycle of a syntactic derivation of the matrix clause.

Once the syntactic derivation has build the matrix clause, and the derivation has been shipped to the interfaces, we end up with a wrong linear order:

(78)   *Postaje vrlo biti   zanimljiv ovaj članak.
        become very be.INF interesting this article
        intended: 'This article becomes to be very interesting.'

Next, consider a derivation where *postati*'become' 'lowers' into the preposed AP. Suppose that prior Spell-out of the embedded clause, the AP raises from the edge of an embedded TP phase to spec TP of *become* clause where it is c-commanded by *postati*'become', as schematically shown in (79-a). Suppose next that the syntactic derivation ends with the merger of *become* in a position higher than the modified predicate. Once the derivation is shipped to the interfaces, assume that *become* lowers into *very interesting* and attaches to *very*, as shown in (79-b).

(79)   a.   [[become] [TP [very interesting] [T] ... [TP ~~very interesting~~ [T be]]]]

        b.   [~~become~~] [[very+**become** interesting] ... [TP be] ...]]]

The output of the derivation in (79-b), once again, produces the wrong linear order:

(80)   *Vrlo postaje   zanimljiv biti   ovaj članak.
        very become.PRS.3SG interesting be.INF this article
        intended: 'This article becomes to be very interesting.'

Having established that predicate 'splitting' must be syntactic, I will motivate two syn-

tactic operations (already mentioned in the previous section) that create the 'split' with modified adjectival predicates. One of them is complex predicate formation with *be*, and the other is predicate inversion to spec TP. The following section starts with the former.

3.8 Complex predicate formation

Before I motivate complex predicate formation in Croatian, we need to understand what data motivated complex predicate formation more generally.

3.8.1 The crosslinguistic data

The data below illustrate two points relevant for the implementation of complex predicate formation in Croatian.

1. complex predicate formation occurs obligatorily with a predicate in the complement of *be* (and raising predicates)

2. complex predicate formation has been analytically implemented either as a (head) incorporation (e.g. English) or as a XP movement (e.g. Dutch) into (a specifier of) 'be' (or a complex predicate formator)

The idea related to the first point is pioneered by Stowell [34]. Crucially, Stowell [34] independently supports the idea that small clause predicates incorporate into a verb which selects them. For Stowell [34], complex predicate formation occurs at LF and via head incorporation as shown in (82). This analysis is showing a small clause predicate incorporation into an ECM verb, which is what underlies (81).

(81)   I consider John foolish

(82)   [V' [V consider [A foolish]][AP John [A ~~foolish~~]]

Another empirical example of complex predicate formation with raising predicates is from

English and it involves *seem*. The example is given in (83).

The example of a 'complex' (or a compound) is in (83). In (83) the participial adjective consists of the adjectival part,*sad* and the raising predicate, *seem*. The internal structure of the complex is given in (84).

(83)   a **sad-seeming** John.

(84)   [A [V [A sad] [V seem]] -ing]

In addition to adjectives, objects (85) and adverbs (86) can also incorporate into verbs, as shown in (85) and (86) (pc Tim Stowell).

(85)   a.   A lion ate a man.
        b.   a **man-eating** lion

(86)   a.   A river flows fast.
        b.   a **fast-flowing** river

The basic structure from which *sad seeming* is derived can be traced to (87). In (87), *sad* ocurs in the complement of *seem*. To derive (83) distributed-morphology style, the predicate first forms a complex with *seem* via incorporation into it, as shown in (88-b).(88-a) gives the merge order underlying (87).

(87)   John seems sad.

(88)   a.   [V seem] [PredP John [Pred [AP sad]]
        b.   [VP [V [A sad] [V seem]] [PredP John [Pred [AP sad]]]

Looking at the Stowell [34]'s ECM data and the compounds with *seem*, it appears that a complex forming predicate must be a head-like element. 'Bigger' predicates corresponding to phrases, for instance, seem not to be able to incorporate. Take for instance, an XP predicate

angry at John. This predicate XP fails to incorporate into *seem* as shown in (89).

(89)   *angry at John seeming man

However, whether complex predicate formation is implemented as a head incorpration or as a phrasal movement around 'be' in some cases is a matter of analysis.

For instance, Koopman and Szabolcsi [35] offers a phrasal analysis of complex predicate formation with separable complex verbs in **Dutch**, which have traditionally included head movement (e.gKoster [36]).

Separable complex verbs in Dutch involve cases as shown in (90)(data from Booij [37]). In (90), the particle *op* and the verb *bellen* occur as a single string, whereas in (90-b), the particle *op* is discontinuous from *bellen*.

(90)   a.   ...dat Hans zijn moeder wilde **opbellen**.
                that Hans his mother want call
                '...that Hans wanted to call his mother.'

          b.   ....dat Hans zijn moeder **op** wilde   **bellen**.
                that   Hans his mother up wanted call
                '..that Hans wanted to call his mother up.'

A standard syntactic analysis of *opbellen*'call up' is given in (91). The verb *bellen*'call' takes a small clause complement (91), from where the particle in (91) incorporates into the verb (Koopman [38], Koopman and Szabolcsi [35]).

(91)   [V [P up] call][SC his mother ~~up~~]]]

An alternative analysis of the smiliar data is the one where the 'small', head-like predicate such as *op* moves as a phrasal constituent, as offered in Koopman and Szabolcsi [35]. Koopman and Szabolcsi [35] assumes that the particle separates from the verb as a part of a remnant constituent and preposes with it leftwards (given antisymmetry, Kayne [39]) in order to form a complex predicate with a selecting auxiliary, as shown in (92-b). (Koopman

and Szabolcsi [35, 2/7] [6].

(92) a. omdat ik Marie zal willen beginnen **opbellen**.
          that   I Marie up will   want   start   upcall
          '...beacuse I will want to start to call up Marie.'

      b. omdat ik Marie [**op** ~~bellen~~] zal willen   beginnen te **bellen**.
          that   I Marie up   call   will want.INF start.INF call
          'because I will want to start to call up Marie.'

Based on the English and Dutch data, we have seen that complex predicate formation can
be implemented both as a head incorporation into a complex predicate formator, such as *be*
and as a phrasal movement into a complex predicate formator. The next task is to determine
which of these analytical possibilities are applicable to Croatian.

3.8.2   Properties of complex predicate formation in Croatian

I assume that complex predicate formation in a copular construction in Croatian occurs
both as a head movement into *be* and an XP movement into spec of *be*. This assumption is
motivated by three patterns of predicate preposing in a root clause, for convenience repeated
in (93)[7].

(93) a. Ponovno je aktualna ova knjiga.
          again   be relevant this book
          'This book is relevant again.'   (the **split** pattern)

      b. Ponovno aktualna je   ova knjiga.
          again   relevant be.PRS.3SG this book
          'This book is relevant again.'   (the **unsplit** pattern)

      c. Aktualna je   ova knjiga.
          relevant be.PRS.3SG this book
          'This book is relevant.'   (the **unmodified** predicate)

---

[6]The particles or small VMs (verbal modifiers) in Koopman and Szabolcsi [35]'s analysis form a constituent
slightly bigger than a VP, which they call VP+. It is this constituent that restructuring verbs require as
their specifier.

[7]I assume that *again* is a 'low' adverb, adjoined to the small clause. See section 3.9 for an empirical
support of this assumption.

3.8.2.1   Complex predicate formation as X/XP movement

Motivated by the crosslinguistic data given in the previous section I assume that *be* (and other raising predicates) have a lexical property that they must combine with a constituent from their complement which is 'predicative' (a constituent which carries a [+pred] feature). Such constituent can be as 'small' as a head or as 'big' as an XP (the latter contains the element that carries the [+pred] feature).

3.8.2.2   Complex predicate formation as head incorporation

Complex predicate formation implemented via *a head movement* is motivated by the split pattern (e.g. 3.8.2.2).

To derive the pattern, by looking at the linear order, the adjectival predicate *aktualan* 'relevant' must occur before the subject, and separated from the adverbial modifier. I assume that *again* is adjoined to the small clause, and in section 3.10 I motivate this analysis. This suggests that *aktualan* 'relevant' must have preposed on its own, prior to AP remnant inverting to spec TP. The analysis of is given in (94).

(94)   [Ponovno ~~ova knjiga aktualna~~] je aktualna ova knjiga [$_{KP}$
        again   this book relevant   be relevant this book   again this book relevant
        ~~ponovno ova knjiga aktualna~~].

    'This book is relevant again.'

The way *aktualan*'relevant' preposes is by incorporating into *be*, as shown in (95)[8].

────────────────────────────────

[8]The tree in (95) shows how the predicate head 'reaches' *be*. In order to incorporate into *be*, *relevant* needs to skip over K, which violates the head movement constraint. One way this can be obviated is to assume that, first, *relevant* incorporates into K, then excorporates from it and incorporates into *be* (for long head movement implemented as steps of incorporation followed by excorporation see Boskovic [24]).

(95)

```
                        BeP
              _____
             /                        \
            Be                         KP
          ___|___              _____|_____
         /       \            /                    \
        A         be        DP                      K           AP
        |                  /__\            _____|_____   _____|_____
     relevant          this book         /      |      \    /    |           \
                                       <A>      K     AdvP  AP            AP
                                        |              /\  /__\      _____|_____
                                     relevant        again        /             \
                                                               <DP>           <A>
                                                               /__\
                                                          this book        relevant
```
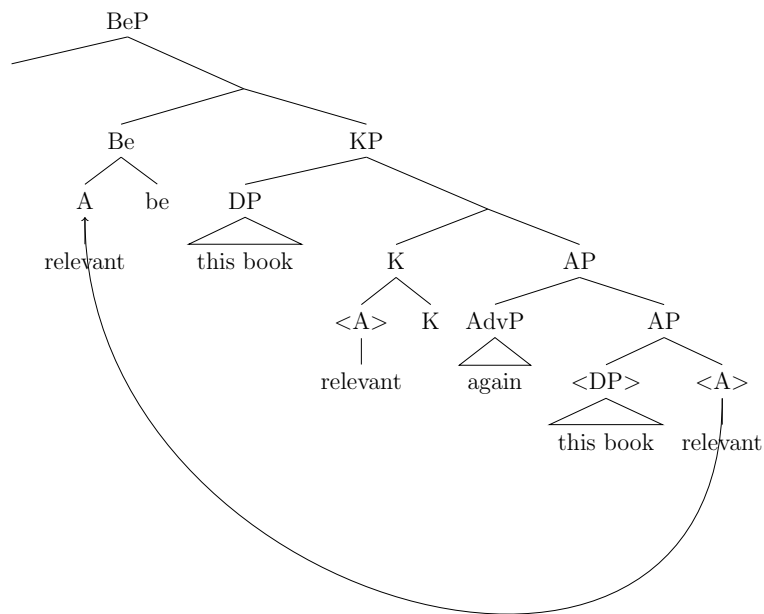
Structurally, the *predicate* which forms a complex with *be* in (95) is a sister of a subject in the external merge position of the subject.

Once T merges in the structure as in (96), a different constituent, this time the sister of K, undergoes predicate inversion to spec TP.

(96)

TP
- AP
  - AdvP: again
  - AP
    - <DP>: this book
    - <A>: relevant
- T
- BeP
  - Be
    - A: relevant
    - be
  - KP
    - DP: this book
    - K
      - <A>: relevant
      - K
    - <AP>
      - AdvP: again
      - AP
        - <DP>: this book
        - <A>: relevant
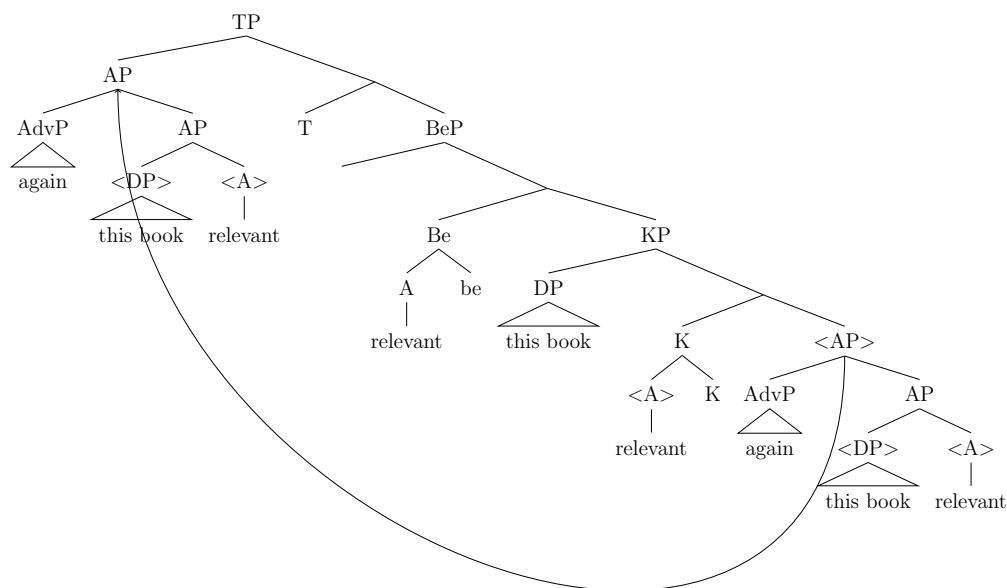
We notice that two distinct constituents undergo complex predicate formation and predicate inversion. This means that what counts as a *predicate* for the purpose of complex predicate formation and predicate inversion need not be the same constituent.

Although we are forced to assume that distinct pieces of a small clause undergo predicate preposing what 'unites' them is a relationship with respect to the subject; a 'smaller' predicate, the sister of a copy of a subject forms a complex predicate with *be* and the sister of K, a projection containing the subject, undergoes predicate inversion.

Going back to 3.8.2.2, how do we know that in 3.8.2.2 it is the 'smaller predicate' i.e. the sister of the copy of the subject that incorporates into *be*?

The reason is data in (97-a) and (97-b).Both examples show that it is not possible to raise the head of the AP under raising to subject predicates. If the predicate is incorporated into *be*, it is expected that it cannot become a subject in spec TP: it is simply too small a constituent to be in spec TP.

(97) a. *Aktualna postaje   biti   ponovno ova knjiga.
          relevant   become.PRS.3SG be.INF again   this book
          intended: 'This book becomes to be relevant again.'

      b. *Zanimljiv postaje   biti   vrlo ovaj clanak.
          interesting become.PRS.3SG be.INF very this article
          intended: 'This article becomes to be very interesting.'

Next, I consider patterns of preposing where complex predicate formation occurs with a sister of a copy of a subject which is an XP.

3.8.2.3   Complex predicate formation as an XP movement into spec BeP

Complex predicate formation implemented as an *XP movement* occurs in the derivation of the unsplit pattern and with unmodified predicate preposing ((93-b) and (93-c)).

In the previous section, we have seen that for the purpose of complex predicate formation we can define a *predicate* as a sister of a copy of a subject in the external merge position of a subject. The question is can we provide evidence where the sister of a copy of a subject is a phrase?

In order to do so, we need more complicated data, such as (98).

(98) contains two adverbs: *pametno*'smartly' which modifies the participial predicate head *riješen*'solved' inside the small clause and a manner adverb *brzo*'quickly', which I assume is adjoined to the small clause. In section 3.10 I motivate the merge position of a manner adverb as adjoined to a small clause.

The available patterns of predicate subject orders are given in (98-b) and (98-c) and they follow the already familiar pattern. The former is the split pattern and the latter an unsplit pattern.

(98) a. Zadatak je   brzo   pametno riješen.
          task   be.PRS.3SG quickly smartly   solved
          'A/the task was quickly solved smartly.'

      b. Brzo   **je**   pametno riješen zadatak.
          quickly be.PRS.3SG smartly   solved task

‘A/the task was quickly solved smartly.’ (the split pattern)

c. Brzo   pametno riješen **je**   zadatak.
quickly smartly   solved be.PRS.3SG task
‘A/the task was quickly solved smartly.’ (the unsplit pattern)

Of a particular relevance is the 'split' pattern in (98-b). The example shows, in a linear order, that *pametno riješen* 'smartly solved' preposes as a phrasal constituent to the position preceding the post-verbal subject. This type of preposing is similar to an independent preposing of an adjectival head in the split pattern in 3.8.2.2, where I assumed that *relevant* preposes to a pre-subject position by forming a complex predicate with 'be'.

The fact that *pametno riješen* 'smartly solved' must have formed a complex with *be* via preposing as an XP is further supported in (99-a), (99-b) and (99-c). These examples show that *riješen* 'solved' cannot prepose on its own without pied-piping *pametno* 'cleverly'.

(99) a. *Brzo   pametno je   riješen zadatak.
quickly smartly be.PRS.3SG solved task
intended: 'A/the task was quickly solved smartly.'

b. *Riješen je   brzo   pametno zadatak.
solved   be.PRS.3SG quickly smartly task
intended: 'A/the task was quickly solved smartly.'

c. *Riješen je   pametno brzo   zadatak.
solved   be.PRS.3SG smartly quickly task
intended: 'A/the task was quickly solved smartly.'

I show steps leading to complex predicate formation with *pametno riješen* 'smartly solved' in (100)-(103) below.

The External merge order in a small clause underlying 3.8.2.2 is given in (100). I assume that *brzo* 'quickly' is a 'low' adverb (following Cinque [40]). As I assumed with another low merge adverb, namely *again*, *brzo* 'quickly' is adjoined to a small clause as well, as shown in (100).

(100)

```
                    AP
          ┌─────────┴─────────┐
        AdvP                  AP
         △            ┌───────┴───────┐
      quickly        DP               A
                     △         ┌──────┴──────┐
                   task      AdvP            A
                             △               │
                          smartly         solved
```
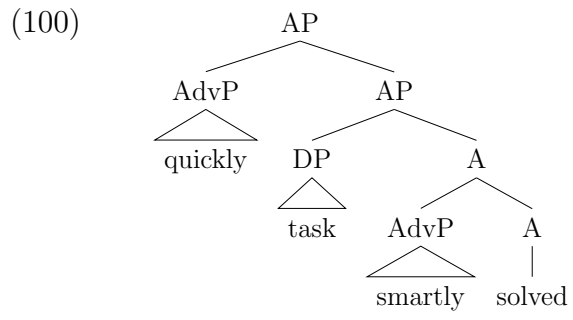
Next, the subject raises to spec KP, as shown in (101).

(101)

```
                    KP
          ┌─────────┴──────────┐
        DP                     │
         △          ┌──────────┴──────────┐
      task         K                      AP
                          ┌───────────────┴────────┐
                        AdvP                        AP
                         △              ┌───────────┴──────┐
                      quickly         <DP>                 A
                                       △           ┌───────┴──────┐
                                     task        AdvP            A
                                                  △               │
                                               smartly         solved
```
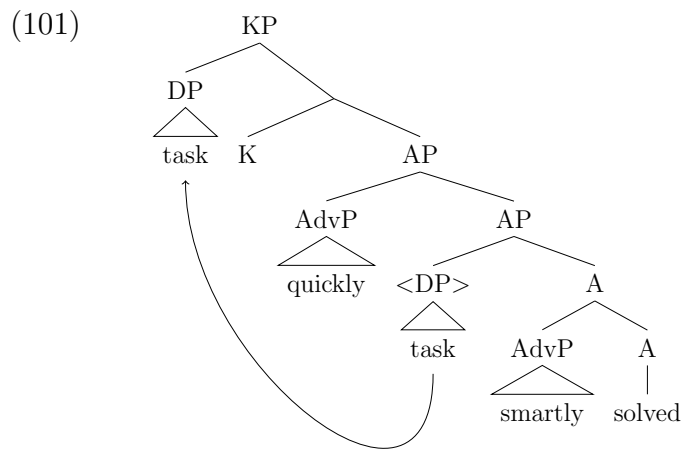
Next, Be merges with the KP, as shown in (102).

(102)

BeP
├─ Be
└─ KP
   ├─ DP
   │ └─ task
   └─ K
      AP
      ├─ AdvP
      │ └─ quickly
      └─ AP
         ├─ <DP>
         │ └─ task
         └─ A
            ├─ AdvP
            │ └─ smartly
            └─ A
               └─ solved
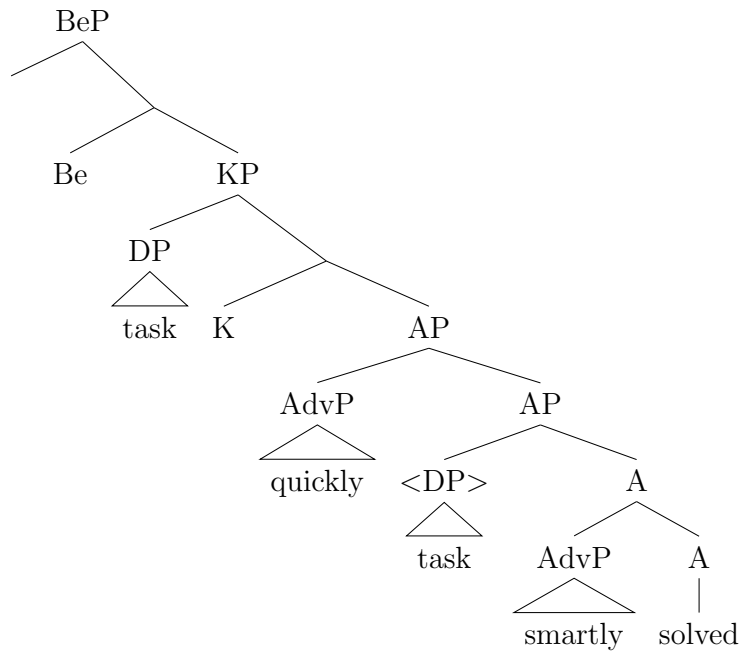
Complex predicate formation is shown in (103). The the sister of the subject in its external merge position pied-pipes up to the first dominating AP to spec BeP.

(103)

BeP
├─ AP
│ ├─ <DP>
│ │ └─ task
│ └─ A
│   ├─ AdvP
│   │ └─ smartly
│   └─ A
│   └─ solved
├─ Be
└─ KP
   ├─ DP
   │ └─ task
   └─ K
      <AP>
      ├─ AdvP
      │ └─ quickly
      └─ <AP>
         ├─ <DP>
         │ └─ task
         └─ A
            ├─ AdvP
            │ └─ smartly
            └─ A
               └─ solved
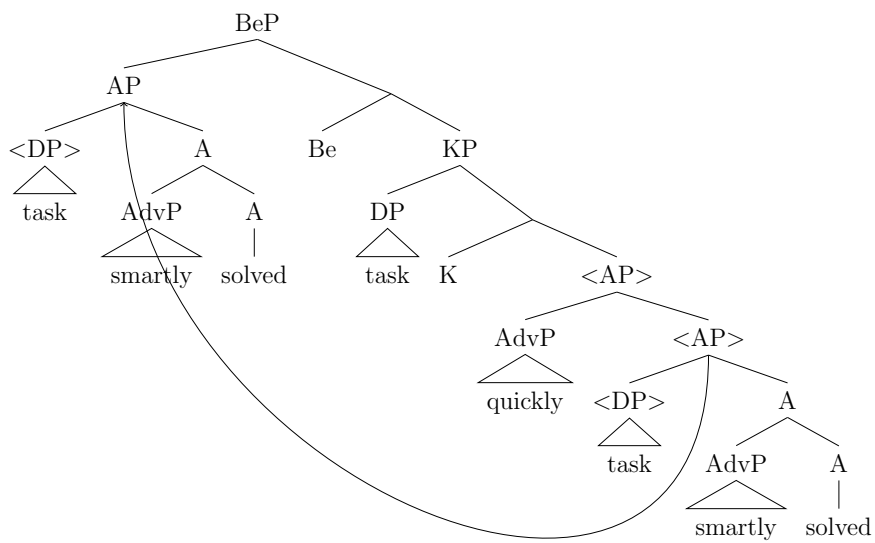
The next step of predicate preposing is predicate inversion, which I leave for discussion until

section 3.9.

3.8.3 Complex predicate formation and unsplit modified and unmodified predicates

While complex predicate formation is obvious in the case of split predicates, it is not obvious from the linear order that complex predicate formation occurs in the unsplit and unmodified pattern as well. I assume that complex predicate formation is obligatory even though it is not 'visible' in the linear order as is the case in the split pattern[9].

A question regarding the unmodified predicates is *how* they prepose. Do they form a complex via head adjunction/incorporation to *be* as assumed in Bošković [8][10] or do they prepose as XPs?

Given the results of the raising data with unmodified predicates in section 3.6, I conclude that unmodified APs prepose as XPs. The raising to subject fact with unmodfied predicates makes head incorporation/adjunction analysis problematic given the locality constraint on

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[9]Showing why complex predicate formation is obligatory is a theoretically abstract issue beyond the scope of this thesis. See, for instance, Koopman and Szabolcsi [35] for arguments pertaining to complex formation in Hungarian and Dutch.

[10]In fact, a head adjunction analysis, as shown in (iii)(data and analysis from Bošković [8]), has been a standard analysis of preposed unmodified predicate as in (i) and (ii).

(i) a. Zaspao   je.
         fallen-sleep be.PRS.3SG
         'He fell asleep.'   (root)
     b. ...da je   zaspao.
         that be.PRS.3SG asleep
         '..that he fell asleep.'   (non-root)

(ii) a. Pametan je.
         smart   be.PRS.3SG
         'He is smart.'   (root)
     b. ...da je   pametan.
         that be.PRS.3SG smart
         '... that he is smart.'   (non-root)

(iii) [Aux pametan [Aux je] Aux] [AP *pro* ~~pametan~~]]

head movement.

Let us look at the patterns of predicate preposing with the unsplit modified and unmodified APs more closely. They are repeated below for convenience. (105) shows the KP structure with an unmodified predicate and (106) shows the KP structure with a unmodified predicate.

(104) a. Ponovno aktualna je   ova knjiga.
           again   relevant be.PRS.3SG this book
           'This book is relevant again.'   (the **unsplit** modified pattern)

       b. Aktualna je   ova knjiga.
           relevant   be.PRS.3SG this book
           'This book is relevant.'   (the **unmodified** predicate)

We can assume that, structurally, what counts as a *predicate* for the purpose of complex predicate formation with the unsplit modified and unmodified predicates is the sister of K, a projection which contains the (copy) of a subject, bolded in (105) and (106).

(105)   KP   (unmodified predicate)

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(106)   KP   (modified predicate)
           ┌─────────┴─────────┐
          DP   AP
      ┌────┴────┐   ┌──────┴──────┐
   this book   K   AdvP   AP
                      ┌──┴──┐   ┌────┴────┐
                     again   <DP>   A
                               ┌───┴───┐   │
                            this book relevant
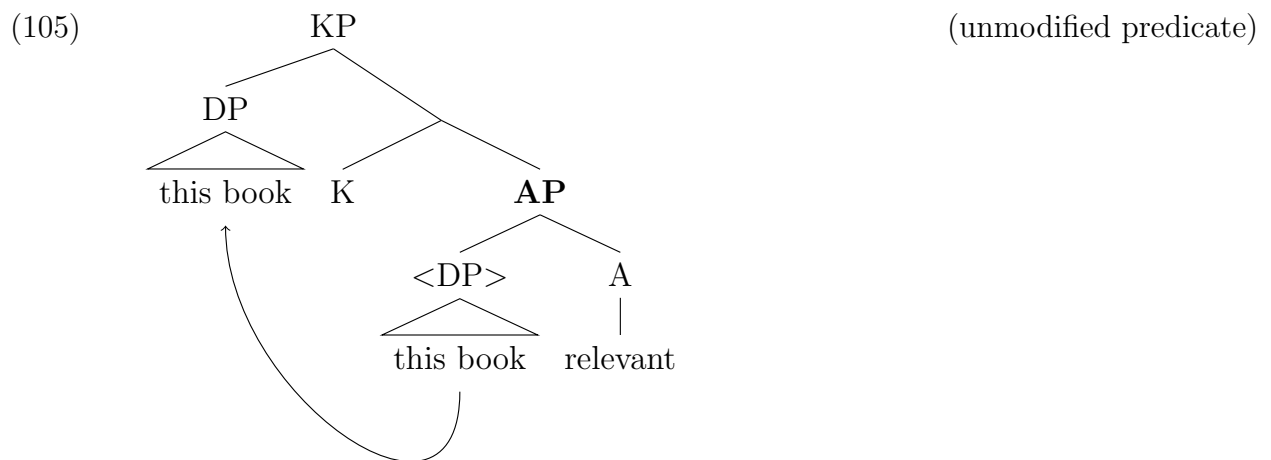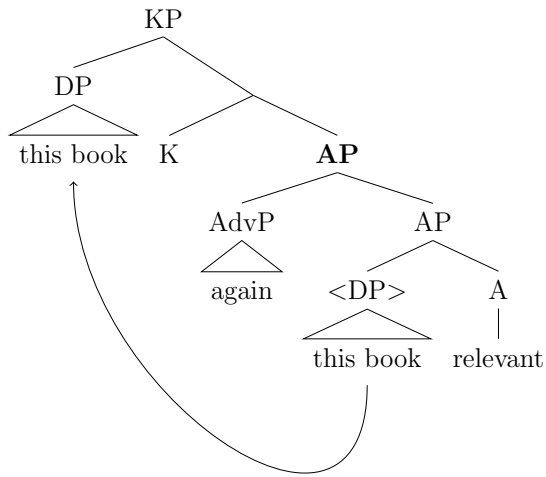
This means that in order to form a complex with *be*, the head of the small clause pied-pipes the sister of K to spec BeP, as shown in (107), with unmodified, and (108), with modified, APs.

(107)   BeP   (unmodified predicate)
              ┌────────────────┴────────────────┐
             AP   │
         ┌────┴────┐   ┌────────┼────────┐
       <DP>   A   Be   KP
     ┌───┴───┐   │   ┌──────────┴──────────┐
  this book relevant   DP   <AP>
                                         ┌────┴────┐   ┌──────┴──────┐
                                      this book   K   <DP>   A
                                                        ┌────┴────┐   │
                                                     this book relevant

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(108) BeP (modified predicate)

AP

AdvP   AP   Be   KP

again   <DP>   A

this book   relevant

DP

this book   K   <AP>

AdvP   AP

again   <DP>   A

this book   relevant
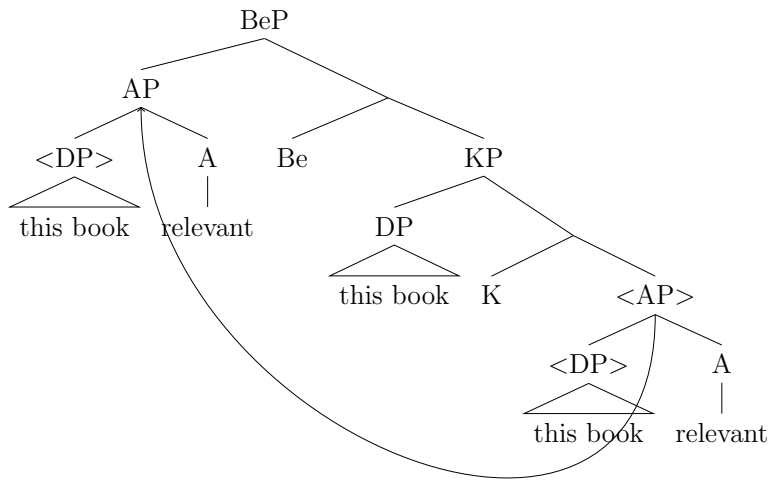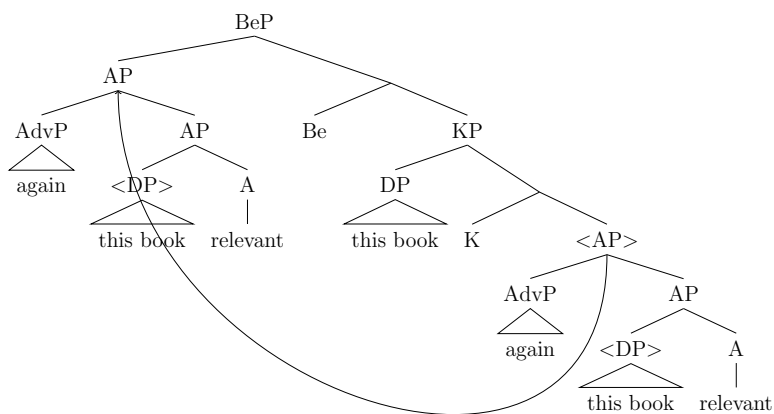
The constituent in spec BeP will, upon the merger of T, undergo predicate inversion to spec TP. I discuss predicate inversion to spec TP in section 3.9.

3.8.3.1   The Summary

To summarize, complex predicate formation is an obligatory step in predicate preposing, both with modified and unmodified predicates. It looks optional with the unsplit modified predicates because of pied-piping.

With respect to what counts as a *predicate* for the purpose of complex predicate formation, there are two options, one with pied-piping and one without. If there is no pied-piping, then the *predicate* is:

- the sister of the copy of a subject in the external merge position of the subject which incorporates into *be*

If there is pied-piping, then the *predicate* is:

- the sister of a projection (i.e. KP) that contains the subject. An example of this case is (98-c) and (93-c).

  The role of pied-piping by a predicate head in complex predicate formation is summarized in Table 3.1.

pied-piping?	yes	yes	no
pattern derived	unsplit(modified)	unmodified	split
constituent which preposes	(sister of K)	(sister of K)	A

Table 3.1: Pied-piping options of a predicate head

The step of predicate preposing following complex predicate formation is predicate inversion to spec TP, which I turn to next.

3.9 Predicate inversion

In the previous section I motivated a step of predicate preposing involving a movement around BeP. In section 3.6, I established that preposed predicates move to a subject position once T merges in the structure. I assume that this operation is **predicate inversion** following Moro [2]).

In the current section I motivate predicate inversion in Croatian. Originally, predicate inversion in Moro [2] was motivated on preposed NP predicates in English.

3.9.1 'Moro-style' inversion

By Moro-style inversion, I assume inversion of small clause predicates around the copula.

Such an inversion, for instance, is restricted to NP predicates in **English** (data are from Moro [2]). (109-a) is an example of a subject-predicate order and (109-b) is an example of predicate-subject order, where the predicate precedes 'be'.

(109)   a.   The picture of the wall was the cause of the riot.
        b.   The cause of the riot was a picture of the wall.

APs, for instance, cannot invert in English, as shown in (110-a). An exception are

comparative predicates, as shown in (110-b) (Emonds [15]).

(110) a. *Very interesting was this book.

    b. Smarter than Bill is his cousin Fred.

Croatian, in addition to APs (see section 3.6) allows a wide variety of predicates to invert around the copula, as shown below. In that, it crucially differs from English. (111-a) shows a subject-predicate order, and (111-b) shows a predicate-subject order.

(111) a. Čovjek bez   predrasuda **je**   dobar edukator.
       man   without prejudice   be.PRS.3SG good educator
       'A man without prejudice is a good educator.'

    b. Dobar edukator **je**   čovjek bez   predrasuda dobar
       good   educator be.PRS.3SG man   without prejudice   good
       edukator.
       educator
       'A man without prejudice is a good educator.'

PPs also invert around the copula, as shown in (112-b).(112-a) is a subject-PP predicate order.

(112) a. Knjiga **je**   na svakom stolu.
       book   be.PRS.3SG on each   table
       'A book is on each table.'

    b. Na svakom stolu **je**   knjiga.
       on each   table be.PRS.3SG book
       'A book is on each table.'

As already familiar from Chapter 2, **participial predicates** also invert around the copula. The following is the example of passive participles. (113-a) shows a subject-predicate order.

(113) a. Auto **je**   kupljen   od   Mare.
       car be.PRS.3SG buy.PASS.PTCP.M.SG from Mara
       'A/the car is bought from Mara.'

b. Kupljen od Mare je auto.
buy.PASS.PTCP.M.SG from Mara be.PRS.3SG car
'A/the car is bought from Mara.'

As seen from the raising to subject data, we have evidence, at least for APs and VPs that predicates prepose to spec TP. This conclusion goes against assumption in Diesing and Zec [1] or Citko [41] (for Polish), that predicates in Croatian (Slavic) prepose to spec TopP. In the following section, I show an independent evidence that predicate inversion is an operation to an A-position.

3.9.2 Further evidence that predicate inversion targets spec TP

I this section, I present the word order in the complement or raising to subject/ECM predicates, anaphor binding and interpretation of predicate initial orders as a further diagnostic of the syntactic position of an inverted AP in Croatian.

First, I consider the word order in the complement of ECM and raising to subject predicates. ECM and raising verbs traditionally take TP complements. If predicate inversion is fine in a complement of such a verb, this can be taken as a further support that predicate preposing in Croatian involves a movement to an A-position. The example in (114) shows that the complement of an ECM verb allows both subject-predicate and predicate-subject orders. The availability of a predicate-subject order in (114-b) supports that predicates invert to an A-position.

(114) a. On smatra ovaj članak vrlo zanimljivim.
he consider.PRS.3SG this.ACC article.ACC very interesting.INST.SG
'He considers this article interesting.'

b. On smatra vrlo zanimljivim ovaj članak.
he considers very interesting.INST.SG this.ACC article.ACC
'He considers this article very interesting.'

A similar conclusion can be made on the basis of (115). The data in (115-b) show that Croatian allows predicate-subject order in the complement of a raising predicate. This

suggests that APs invert to a position lower than the left periphery.

(115) a. Njemu   izgleda   ovaj članak vrlo zanimljiv.
           him.DAT.SG appear.PRS.3SG this article very interesting
           'This article to him seems very interesting.'

       b. Njemu   izgleda   vrlo zanimljiv ovaj članak.
           him.DAT.SG appear.PRS.3SG very interesting this article
           'This article appears to him very interesting.'

Preposed predicates can also bind a pronoun as a variable, as shown with PPs in
(116-b). This further suggests that the inverted predicates must be in an A position
(the data are modelled on the Polish data from Citko [41]). (116-a) shows the subject-
predicate order. In this order, the pronoun cannot be bound by the predicate *Šegota*,
which suggests that the subject which precedes *je* cannot reconstruct below the small
clause predicate. (116-b) shows the predicate-subject order. In this order, the object of
a preposition *Šegota* binds into the variable contained in the subject. This suggests that
PPs reconstruct below the subject. A potential problem with (116-b) is that we are not
certain whether the coindexation between *Segota* and *njezinog* is showing binding or
merely coreference, given that *Segota* is structurally an object of a preposition, which
due to its structural position cannot c-command (and consequently, bind) the variable
contained in the subject.

(116) a. Prijatelj njezinog susjeda$_j$/*$_i$ je kod Šegote$_i$.
           friend   her   neighbour be at Šegota
           'A/the friend of her neighbour is at Šegota's place.'

       b. Kod Šegote$_i$ je   prijatelj njezinog$_i$ susjeda.
           at   Šegota.GEN.SG be.PRS.3SG friend   her   neighbour
           'A/the friend of her neighbour is at Šegota's place.'

To see that in (116-b) the object of a preposition indeed binds into a pronominal
variable, I substitute the object of the preposition *Šegota* with a QP *svaka žena* 'every
woman', as shown in (117). The result in (117) still shows that the QP binds into

the subject, which means that *svaka zena* 'every woman' must have c-commanded the variable at a point in the derivation. I take this result to suggest that the pronominal variable contained in the small clause subject in (116-b) is, indeed, bound.

(117) Kod svake zene$_i$ je   prijatelj njezinog$_i$ susjeda.
      at every woman be.PRS.3SG friend   her   neighbour
      'At every woman is a friend of her neighbour.'

Finally, I report my own judgments on the interpretation of preposed predicates. Predicate initial orders are felicitous as an answer to a question *What happened?*, which further supports the hypothesis that predicate preposing need not be discourse marked.

Context: And? What happened?

(118) a. Marija je   ušla   u sobu.
           Mary   be.PRS.3SG enter.PTCP.F.SG in room
           'Mary entered the/a room.'

       b. U sobu je   ušla   Marija.
           in room be.PRS.3SG enter.PTCP.F.SG Mary
           'Mary entered a/the room.'

       c. To pitanje ti   je   nepotrebno.
           that question you.CL.DAT be.PRS.3SG unnecessary
           'That question is unnecessary for you (to ask).'

       d. Nepotrebno ti   je   to   pitanje.
           unnecessary you.CL.DAT be.PRS.3SG that question
           'That question is unnecessary for you (to ask).'

If predicates raise to spec TP, where are small clause subjects? In the following section I motivate complementary distribution of predicate/subject raising to spec TP.

3.9.3   Moro's analysis of raising out of a small clause

An important claim of Moro [2] is that raising of both a small clause predicate and a subject out of a small clause is not possible; either the predicate raises or the subject does, but not both. This claim is motivated by a ban on A-bar movement across an

already raised XP in spec TP. The data are presented below.(119-a) shows a subject-predicate order in the embedded clause under *that*. (119-b) shows the path of small clause subject raising from the external merge position in the small clause to the subject (spec TP) position of the embedded clause.

(119)   a.   You think that a picture of the wall was the cause of the riot.

           b.   You think that [$_{TP}$ a picture of the wall] was [$_{SC}$~~the picture of the wall~~ the cause of the riot].

The example in (120-a) shows that a wh-movement of the subject in a subject-predicate order in an embedded clause to the matrix clause is allowed. The A-bar movement involved in (120-a) is represented in (120-b). The analysis in (120-b) shows the subject moves from the external merge position in a small clause, through spec TP in the embedded clause to the left periphery of the matrix clause.

(120)   a.   Which picture do you think was the cause of the riot?

           b.   [Which picture] do you think [$_{TP}$~~which picture~~] was [$_{SC}$~~which picture~~ the cause of the riot]?

The example in (121-a) shows a sentence where the embedded clause order is predicate-subject. (121-b) shows the analysis of (121-a) where the small clause predicate has raised from the small clause to embedded clause subject position (spec TP).

(121)   a.   you think that the cause of the riot was the picture of the wall.

           b.   you think that the cause of the riot was [$_{SC}$ the picture of the wall ~~the cause of the riot~~].

The example in (122-a) shows a predicate-subject order in the embedded clause, and a failure of attempted long distance A-bar movement of the small clause subject across the predicate (Moro [2], pg. 45). (122-b) shows the predicate in a raised (spec TP)

position, and an illegitimate path of movement of the small clause subject, from the small clause to the matrix clause left periphery.

(122)   a.   *Which picture do you think the cause of the riot was?

b.   *[Which picture] do you think [$_{TP}$the cause of the riot] was [$_{SC}$~~which picture the cause of the riot~~]?

Analytically, the problem in (122-a)/(122-b) is that of locality; raised predicates and subjects must land in spec TP. If this position is already occupied by either the subject or the predicate, an attempt to move the remaining XP from the small clause (again, either the subject or the predicate) fails [11]

A similar fact holds in Croatian; A-bar movement of a subject or a predicate cannot cross over an already raised subject/predicate.

This is illustrated below. (123-a) shows a sentence with a subject-predicate order in the embedded clause. (123-b) shows the analysis of (123-a) where the small clause subject raises from the external merge position in a small clause to spec TP.

(123)   a.   Misliš   da   slika   na mojem zidu jest   uzrok nemira.
think.PRS.2SG that picture on my   wall be.PRS.3SG cause unrest
'You think that a picture on my wall is a cause of unrest.'

b.   Misliš   da   [$_{TP}$slika na mojem zidu] jest
think.PRS.2SG that picture on my   wall be.PRS.3SG
[$_{SC}$~~slika na mojem zidu~~ uzrok nemira]
picture on my wall   cause unrest
'You think that a picture on my wall is a cause of unrest.'

---

[11]In Moro [2]'s ECP inspired analysis, a DP trace must be licensed by the closest c-commanding (agreement) head that contains the features of the moved DP (Moro [2]).

The way a head acquires the features of a DP (in a pre-Agree system) is in a spec-head configuration.

Since Moro [2]'s assumption is that there is only one agreement head in a copular construction, namely T, either the predicate or the argument DP must 'activate' agreement features on T, but not both.

If the subject raises, as in (119-b), the subject activates agreement on T via spec head configuration with T. But if both the subject and the predicate raise, as in (124-b), then there are two DP traces, only one of which can be licensed, because only one DP can raise to spec TP.

To simplify, if spec TP is already filled by the predicate DP, this blocks movement of another DP (A/A-bar) (Moro [2], pg. 46).

The example in (124-a) shows the A-bar movement of a subject in a subject-predicate order. (124-b) shows the analysis of (124-a) where the subject undergoes A-bar movement from the embedded spec TP to the matrix clause left periphery. (124-a) is fine, as predicted based on the parallel English example.

(124)   a.   Koja slika   mislis   da   jest   uzrok nemira?
             which picture think.PRS.2SG that be.PRS.3SG cause unrest
             'Which picture do you think is the cause of unrest?'

         b.   Koja slika   mislis   da   jest   [$_{TP}$~~koja slika~~] uzrok
             which picture think.PRS.2SG that be.PRS.3SG which picture cause
             nemira?
             unrest
             'Which picture do you think is the cause of unrest?'

The attempt to wh-move the predicate of a small clause across the already raised subject is not possible, as shown in (125-a). (125-b) shows the analysis of (125-a) where the small clause subject in spec TP blocks the wh-movement of a predicate.

(125)   a.   *Uzrok čega   misliš   da   slika   na mojem zidu jest?
             cause   of what think.PRS.2SG that picture on my   wall be.PRS.3SG
             intended: 'Which picture do you think is the cause of unrest?'

         b.   *Uzrok čega   misliš da   [$_{TP}$slika na mojem zidu] jest
             cause   of what think that picture on my   wall be.PRS.3SG
             [$_{SC}$~~slika na mojem zidu uzrok čega~~]?
             picture on my wall   cause of what
             intended: 'Which picture do you think is the cause of unrest?'

What happens if, instead of a subject, we rise a predicate and attempt a wh-movement of a subject across it? The example in (126-a) shows the predicate-subject order in the embedded clause.(126-b) shows that in a predicate-subject order, the predicate has raised from a small clause to spec TP.

(126)   a.   Misliš   da   uzrok nemira jest   ova slika.
             think.PRS.2SG that cause riot   be.PRS.3SG this picture
             'You think that this picture is a cause of the riot.'

b. Misliš da [TPuzrok nemira] jest [SCova slika
think.PRS.2SG that cause riot be.PRS.3SG this picture
~~uzrok nemira~~].
cause riot
'You think that this picture is a cause of the riot.'

The example in (127-a) shows that A-bar movement of a subject across a predicate in a predicate-subject order in the embedded clause is not possible. (127-b) shows the analysis of (127-a) where the predicate in spec TP blocks wh-movement of a subject across it.

(127) a. *Koja slika misliš da uzrok nemira jest?
which picture think.PRS.2SG that cause unrest be.PRS.3SG
intended: 'Which picture do you think is the cause of unrest?'

b. *Koja slika misliš da [TPuzrok nemira] jest
which picture think.PRS.2SG that cause unrest be.PRS.3SG
[SC~~koja slika uzrok nemira~~]?
which picture cause unrest
intended: 'Which picture do you think is the cause of unrest?'

I take the facts with a wh-movement of either a predicate or a subject across a raised subject/predicate to support the portion of Moro [2]'s analysis by which raising a subject out of small clause to spec TP is in complementary distribution with predicate raising from the small clause to spec TP in Croatian.

But if a small clause subject does not occupy spec TP, does this necessarily mean that it stays in situ?

In the following section I argue that the subject raises as well, but not as high as a spec TP.

3.9.4 The position of a subject and the structure of a small clause

In Chapter 1, I assumed the Stowellian structure of a small clause, which I illustrate on a datum with preposed unmodified predicate.

(128)   Poznat je   Picassov   portret.
         famous be.PRS.3SG Picasso.GEN.M.SG portrait
         'Picasso's portrait is famous.'

(129)

```
                    AP
                   /  \
                 DP     A
                /  \    |
  Picasso's portrait  famous
```
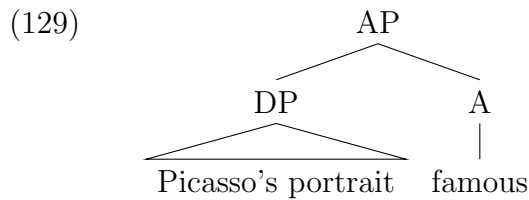
In 3.6, I assumed that the subject raises to spec KP. The question is what reasons do we have to assume that the subject raises to spec KP.

I argue below that the assumption is necessary, otherwise we would derive the incorrect output, namely, the one where the subject in its external merge is pied-piped along to spec BeP, as shown in (130). The wrong output would be derived because the assumption in section 3.7, namely that unmodified predicates prepose as APs by pied-piping the sister of K, a projection which contains the copy of a raised small clause subject. Given the assumption, if the subject did not raise prior to AP containing the (copy of a) subject being pied-piped, we would derive the unattested output in (130).

(130)   *Picassov   portret poznat je/jest.
         Picasso.GEN.M.SG portrait famous be.PRS.3SG/be.PRS.3SG
         'Picasso's portrait is famous.'

KP, as already mentioned, is a case position, motivated in Croatian by rich case/agreement morphology (Bittner and Hale [42]). For convenience, the 'updated' version of the domain below 'be' is shown in (131).

(131)

```
                          KP
            ┌──────────────┴──────────┐
          DP                          │
     ┌─────┴──────┐              ┌─────┴──────┐
Picasso's portrait  K           │           AP
                                      ┌──────┴────┐
                                   <DP>           A
                              ┌──────┴──────┐     │
                         Picasso's portrait  famous
```
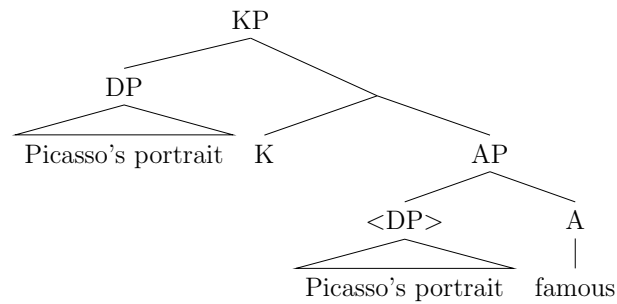
The subject raises to spec KP in order to check the nominative case. The subject raises to spec TP (when the predicate remains in a small clause) to check the agreement features on T.

In the following subsection, I show by a Q-float diagnostic, that the subject raises from a small clause.

3.9.4.1 The Q-float data

To mark the edge of the small clause, I will use the 'low' adverb *again*'ponovno', which I assumed in section 3.7 is adjoined to AP.

The data in (132-a) and (132-b) illustrate the position of the subject lower than T but higher than the small clause. (132-a) shows the quantified subject preceding *again.*(132-b) shows that the quantifier in a position preceding the low adverb can be stranded from that position.

(132)   a.   Rekao je   da   će   biti sve knjige **ponovno**
             said   be.PRS.3SG that will.FUT.3PL be all books again
             aktualne.
             relevant
             'He said that all books will be relevant again.'

        b.   Rekao je   da   će   knjige biti   sve **ponovno**
             said   be.PRS.3SG that will.FUT.3PL books be.INF all again
             aktualne.
             relevant
             'He said that all books will be relevant again.'

I assume that in (132-a), the quantified subject has raised from a small clause, as shown in (133-a). This assumption is supported by the fact that the subject precedes the low adverb. Crucially, the position occupied by the subject is lower than *biti*'be', which I assume is in T. The example in (133-b) shows that the quantifier can be stranded in the position where it precedes the adverb. The position of the dissociated DP *books* in (133-b), which precedes *biti*'be', is compatible with a spec TP position.

(133) a. Rekao je   da   će   biti   sve knjige **ponovno**
           said   be.PRS.3SG that will.FUT.3PL be.INF all books again
           [*SC*~~sve knjige~~ aktualne].
           all books   relevant
           'He said that all books will be relevant again.'

       b. Rekao je   da   će   knjige biti   sve ~~knjige~~
           said   be.PRS.3SG that will.FUT.3PL books be.INF all books
           ponovno [*SC*~~sve knjige~~ aktualne].
           again   all books   relevant
           'He said that all books will be relevant again.'

To summarize, the Q-float test above shows that the small clause subject, in addition to the position in the small clause and the position in spec TP can occupy a position lower than T but higher than the small clause. I assume this position, K(ase)P is a position to which the subject obligatorily raises as shown in (131). I assume that KP is located between *Be* and the small clause.

(134)   [*BeP* [*Be*] [*KP* [*K*] [*AP* DP A]]]

3.9.5   A note on the minimality problem

In the previous section, I have motivated that the small clause subject always raises to spec KP, where it checks the nominative case feature. Once T merges in the structure, the DP subject in spec KP will always be the closest XP to the check the EPP on T. If the subject is always closest to T, given that it always raises to spec KP, how does a predicate ever gets to precede the subject, and move to spec TP?

Now we face a *minimality* problem, which is standardly associated with predicate inversion (e.g. Den Dikken [14]). Stated in the most general sense, minimality requires the movement, if necessary, to be the shortest possible (The Minimal Link Condition in Chomsky [13]). If a movement is required for the purpose of checking the features on T, we would assume the closest XP to be able to fulfill this requirement, which in the context of a small clause in the complement of the copula is always the subject. The predicate takes a longer path to spec TP and across the DP subject. Thus, the minimality predicts predicate inversion to be impossible, but this is not what we observe. At this point, I have nothing new to add to resolve the problem. Instead, I resort to Den Dikken [14]'s resolution of the problem involving equidistance[12] and extension of a domain via head incorporation[13].

3.9.6 The summary of predicate preposing mechanisms

In sections 3.7 and 3.8 I have motivated that predicates undergo two steps of preposing:

1. complex predicate formation with *be*

2. predicate inversion (a la Moro [2])

There are two options in how complex predicate formation and predicate inversion are satisfied:

1. Option 1: the same constituent satisfies both predicate inversion and complex predicate formation. Such a constituent is the sister of K.

2. Option 2: two different constituents satisfy complex predicate formation and predicate inversion (*predicate* (for the purpose of complex predicate formation)=the

---

[12]

(i)   Equidistance (adapted from Hornstein et al. [43]): If α is a target for movement for γ, then for any β that is in the same minimal domain as α, α and β are equidistant from γ.

[13]As it is known within GB theory, head movement 'extends' the domain (by e.g. Government Transparency corollary (Baker [44]) (Hornstein et al. [43])

sister of a copy of a subject in the external merge position of a subject; *predicate* (for the purpose of predicate inversion)=the sister of K)

Option 1 outputs the unsplit pattern and unmodified predicate preposing.

The relevant data are, for convenience, repeated below.

(135) a. Ponovno aktualna je   ova knjiga.
           again   relevant be.PRS.3SG this book
           'This book is relevant again.'   (the **unsplit** pattern)

       b. Aktualna je   ova knjiga.
           relevant   be.PRS.3SG this book
           'This book is relevant.'   (the **unmodified** predicate)

(136) shows the step which always precedes steps of predicate preposing namely subject raising to spec KP.

(136)   (subject raising to KP)

```
                                        KP
                                       /  \
                                  <DP>     \
                                  /\        \
                            this book  K      AP
                                             /  \
                                         AdvP    AP
                                          /\     /  \
                                       again <DP>    A
                                             /\      /\
                                       this book  relevant
```
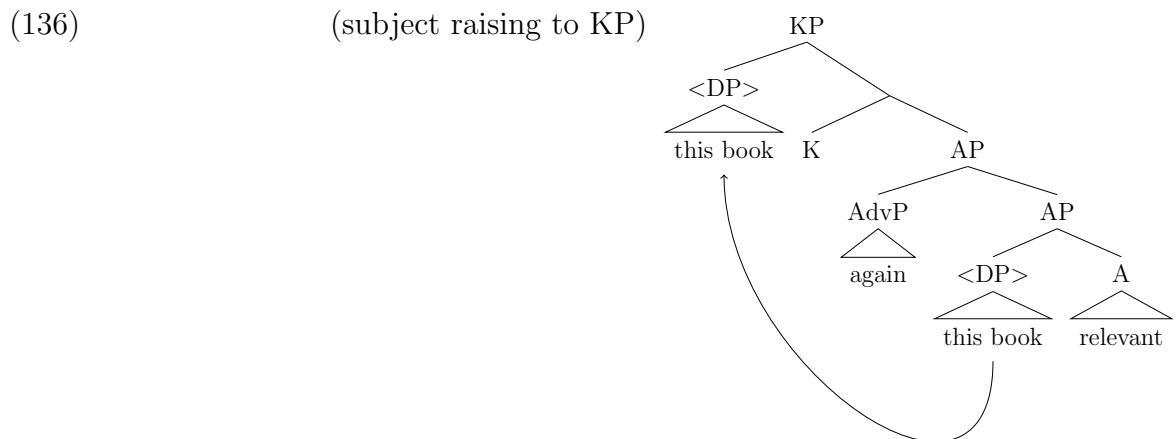
I illustrate Option 1 with a derivation of modified unsplit predicate preposing given in (135-a).

(137) illustrates complex predicate formation with the sister of K.

(137)   (complex pred. formation)

```
                              BeP
                    ┌──────────┴──────────┐
                   AP                    ┌─┴──┐
              ┌─────┴─────┐             Be    KP
            AdvP          AP            │   ┌──┴────────┐
             △        ┌───┴───┐        be <DP>          ┌──┴──────┐
           again   <DP>       A      this book  K      <AP>
                    △         △               ┌───────┴────┐
                this book  relevant          AdvP          AP
                                              △        ┌────┴───┐
                                            again    <DP>       A
                                                      △         △
                                                  this book  relevant
```
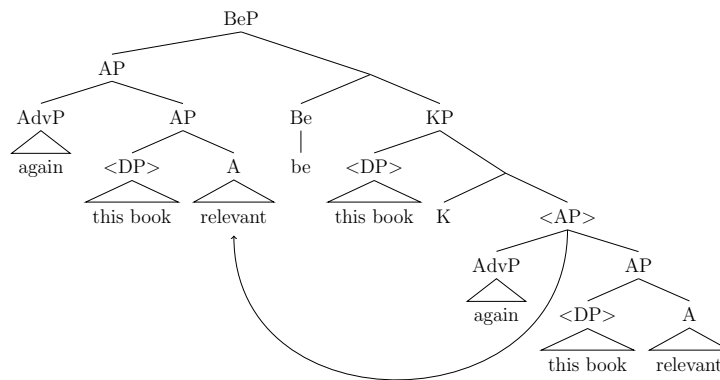
(138) illustrates predicate inversion with the sister of K.

(138)   (predicate inversion)

```
                          TP
              ┌───────────┴────────────┐
             AP                    ┌────┴─────┐
        ┌─────┴─────┐             T          BeP
      AdvP          AP                  ┌─────┴──────────┐
       △        ┌───┴───┐             <AP>              ┌─┴───┐
     again   <DP>       A        ┌─────┴─────┐         Be    KP
              △         △       AdvP         AP        │   ┌──┴──────┐
          this book  relevant    △       ┌───┴───┐    be <DP>       ┌──┴──────┐
                               again   <DP>       A  this book  K  <AP>
                                        △         △            ┌───┴────┐
                                    this book  relevant       AdvP      AP
                                                               △    ┌────┴───┐
                                                             again <DP>      A
                                                                   △         △
                                                              this book  relevant
```
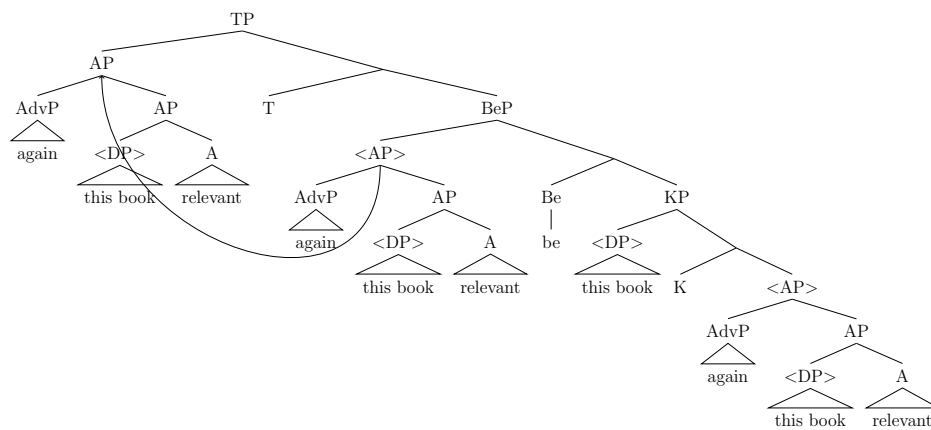
<u>Option 2</u> outputs the split pattern. The relevant datum is, for convenience, repeated in (139).

(139)   Ponovno je aktualna ova knjiga.
          again   be relevant this book
          'This book is relevant again.'   (the **split** pattern)

Following the subject raising to KP, which I omit here, complex predicate formation occurs with a head of AP and 'be' via head adjunction of A to be as shown in (140)[14].

---

[14]Because *relevant* undergoes head movement, it must 'skip' over the intervening K head. I assume it does

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(140) (complex pred. formation)

```
                              BeP
                         ┌─────┴─────┐
                        Be           KP
                      ┌──┴──┐    ┌────┴────┐
                      A    be   K        <AP>
                   relevant  ┌──┴──┐   ┌────┴────┐
                            <A>   K   AdvP       AP
                             │        again   ┌───┴───┐
                          relevant          <DP>     <A>
                                          this book  relevant
```
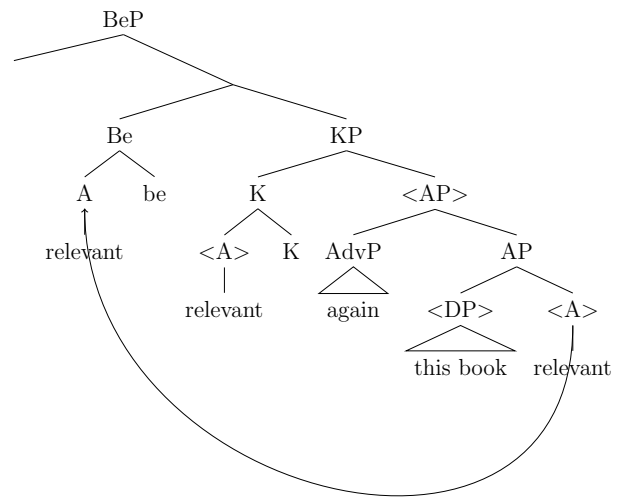
Predicate inversion involves preposing of the sister of K to spec TP, as shown in (141).

(141)

```
                              TP
                     ┌────────┴────────┐
                    AP                  ┌───┴───┐
              ┌─────┴─────┐            T       BeP
            AdvP          AP               ┌────┴────┐
            again    ┌────┴────┐         <AP>        ┌──┴──┐
                   <DP>       <A>    ┌────┴────┐    Be     KP
                 this book  relevant AdvP      AP ┌─┴─┐ ┌──┴──┐
                                    again  ┌───┴──┐ A be K  <AP>
                                         <DP>    <A> relevant
                                       this book relevant
```
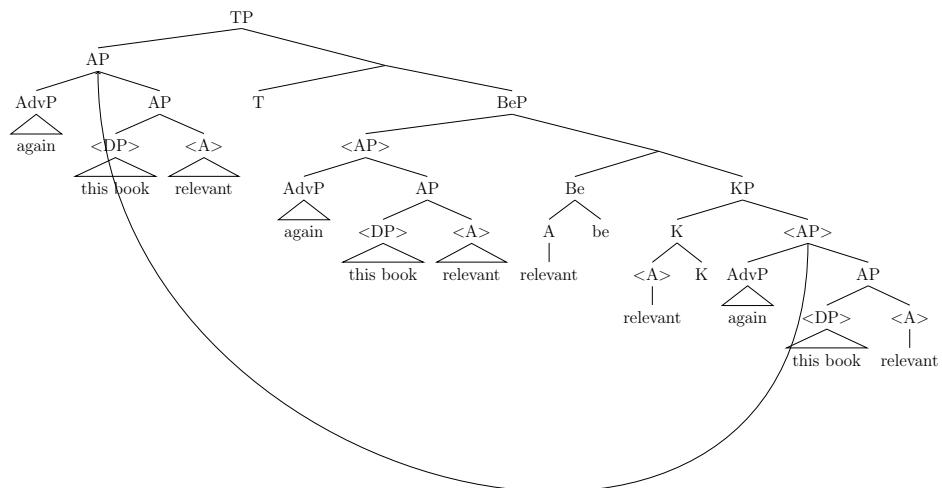
Next, I motivate patterns of preposing with degree and manner adverbs.

───────────────────────

so via a step of incorporation into K followed by a step of excorporation and adjunction to 'be'.

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3.10 Position of adverbs in split constituents

In this section, I focus on the external merge position of degree modifiers and 'low' (manner) adverbs in order to motivate patterns of predicate preposing which involve *vrlo/skroz/baš* 'very/throroughly/truly' and *ponovno*'again', *dobro*'well'.

3.10.1 The degree modifier

The split pattern with modified adjectival predicates, where the modifier is a degree adverb, such as *baš*'really', *skroz*'totally' is given in (142-a). The relevant adverbs are bolded for a better visibility.

(142) a. **Jako/vrlo/užasno/baš/skroz**   **je**   zanimljiv ovaj
intensely/very/horribly/really/thoroughly be.PRS.3SG interesting this
članak.
article
'This article is intensely/very/terribly/really/thoroughly interesting.'

b. **Jako/vrlo/užasno/baš/skroz**   zanimljiv **je**   ovaj
intensely/very/horribly/really/thoroughly interesting be.PRS.3SG this
članak.
article
'This article is intensely/very/terribly/really/thoroughly interesting.'

A common property of these adverbs is that they are not exclusive to AP environments. For instance, they can bind an event variable supplied by the verb as shown in (143). The fact that degree adverbs can occur as verbal modifiers shows that these adverbs can be externally merged high in the clausal spine, at least higher than av/VP.

(143) a. Oni jako/**skroz**/**dosta**/**užasno**   poštuju   ovog
they intensely/thoroughly/enough/terribly respect.PRS.3PL this
autora.
author
'They respect this author tremendously/very much/terribly/enough.'

b. On **užasno**/**dosta** pleše.
he terribly/enough dance.PTCP.M.SG

'He dances terribly/enough.'

Degree modifiers can also appear in the DPs, as adjectival modifiers. The fact that they occur DP internally shows that they can also be merged 'low' in the structure.

(144)   a.   Pročitala   sam   **baš/jako/vrlo/užasno**   dobar
                read.PTCP.F.SG be.PRS.1SG really/intensely/very/terribly good
                članak.
                article
                'I read really/intensely/very/terribly good article.'

    b.   Čula   sam   o   **baš/jako/vrlo/užasno**   dobrom
                hear.PRS.3SG be.PRS.1SG about really/intensely/very/terribly good
                članku.
                article
                'I heard about a really/intensely/very/terribly good article.'

The reasonable question is whether we can link, what superficially appears as constituent 'splitting' involving the copula, to the syntactic properties of the (degree) adverbs, given the fact that they can be associated with more than one syntactic environment, and, consequently, more than one external merge position.

Such observation is not new, and constituent splits involving degree adverbs have been attested in other languages, such as French. In the following section, I consider how this crosslinguistic fact informs a potential syntactic analysis of the split pattern in Croatian.

3.10.2 *Beaucoup* and *Combien* in French

Similar to Croatian, French degree modifiers *beaucoup* ' a lot' and *combien* 'how many' can be separated from the constituents they are semantically associated with, as in (145-b)-(145-c), where the modifiers are associated with a partitive noun phrase (data from Doetjes [45]).

(145)   a.   Jean a   lu   **beaucoup** de livres.
                John have.PRS.3SG read a lot   of books
                'John read a lot of books.'

         b.   Jean a   **beaucoup** lu   de livres
                John has a lot   read of books
                'John has read a lot of books.'

         c.   **Combien** as   tu lu   de livres?
                how.many have you read of books
                'How many books did you read?'

There are two logical possibilities, although not equally theoretically plausible (I explain shortly why not), which derive the 'splits' in (145-b)-(145-c). One possibility is that a degree adverb undergoes **internal merge** from the external merge position in the NPs, as shown in (146).

(146)   [Jean [beaucoup] [lu] [~~beaucoup~~ [de livres]]]

The possibility in (146) is potentially theoretically problematic, given that since Pollock [26] it is generally assumed that adverbs do not move (unless focused)[15].

The other possibility is that *beaucoup* is externally merged in a position in which it appears as if it has separated from the nominal category that it binds into. This hypothesis is supported by the fact that *beaucoup*, just like Croatian degree adverbs, occurs not only as a binder of a degree variable contained in a partitive DP, but as an adverb, where it binds the event variable supplied by the verb as shown in (147) (Obenauer [47], Doetjes [45](data from Doetjes [45]).

(147)   Jean est **beaucoup** a la maison.
           Jean is   a lot   at the house
           'Jean is at home a lot.'

The second possibility entails that, given the relative 'freedom of merge' of *beau-*

---

[15]Analysis which involves adverb movement in order to derive split constituents such as (142-a) in Srebo-Croatian, has been proposed by Talić [46].

coup/combien, these modifiers need not have been merged within the partitive constituent in (145-b)-(145-c). If this hypothesis is correct, then the splitting is only a(n) (surface order) illusion.

Following Doetjes [45], I adopt the proposal that degree adverbs have more than one external merge position, either occurring within a DP/AP or outside of it. I show how this assumption becomes relevant for the analysis of the two patterns with preposed predicates in Croatian in the following section.

3.10.3 Merge positions of degree adverbs in Croatian

In this section, I show that a degree adverbs *vrlo*'very' and *baš*'truly' have a low merge position in a clause.

Baš 'truly'. First, I motivate the low merge position of the adverb *baš* 'truly' by focusing on the split pattern.

Each sentence in (148) contains two degree adverbs; one occurring below the temporal adverb *jučer*'yesterday' and one above it. (148-a) shows the available split pattern. The focus is on the two ways a split pattern can be derived assuming that degree adverbs have two different external merge options.

For the degree adverb to be split from the rest of the constituent and to occur root clause initially, as in (148-a), the adverb must have been either merged as the highest XP in the clause and undergo internal merge position to spec rootP from the position or the adverb became the closest XP to the root via internal merge of the remnant constituent of a small clause that contains the adverb.

The first option is illustrated in (148-b) and the second option is illustrated in (148-c).

The rest of the data show other available and unavailable options regarding predicate preposing. (148-d) shows the unsplit option, and (148-e) shows that both *very* and *truly* cannot prepose as a unit which suggests that the two adverbs do not form a constituent.

(148)   a.   **Baš** sam   jučer   **vrlo** zanimljiv članak pročitala.
truly be.PRS.1SG yesterday very interesting article read.PTCP.F.SG
'I read a truly very interesting article yesterday.'

       b.   **Baš** sam   ~~bas~~ jučer   **vrlo** zanimljiv članak
truly be.PRS.1SG truly yesterday very interesting article
pročitala.
read.PTCP.F.SG
'I read a truly very interesting article yesterday.'

       c.   [**Baš** ~~vrlo zanimljv~~]   sam   jučer   vrlo zanimljiv članak
truly very interesting be.PRS.1SG yesterday very interesting article
pročitala.
read.PTCP.F.SG
'I read a truly very interesting article yesterday.'

       d.   **Baš** vrlo zanimljiv članak sam   jučer   pročitala.
truly very interesting article be.PRS.1SG yesterday read
'I read a truly very interesting article yesterday.'

       e.   *__Baš__ **vrlo** sam   jučer   zanimljiv članak pročitala.
truly very be.PRS.1SG yesterday interesting article read.PTCP.F.SG
intended: 'I read a truly very interesting article yesterday.'

The option in (148-c), where *baš*'truly' preposes as a part of a remnant is supported by the raising data in (149-a) and its analysis in (149-b).

(149)   a.   **Baš** postaje   biti   vrlo zanimljiv ovaj članak.
truly become.PRS.3SG be.INF very interesting this article
'This article becomes to be truly very interesting.'

       b.   [**Baš** ~~vrlo zanimljiv~~] postaje   [bas~~vrlo zanimljiv~~]   biti
truly very interesting become.PRS.3SG truly very interesting be.INF
ovaj članak [~~bas vrlo zanimljiv~~].
this article truly very interesting
'This article becomes to be truly very interesting.'

Assuming the analysis of raising under raising to subject predicates as shown in this Chapter, for *baš*'truly' to prepose as a part of an AP remnant, the adverb must have been adjoined to AP, as shown in (150).

(150)

KP
DP
article K **AP**
DegP AP
truly <DP> A
article DegP A
very interesting
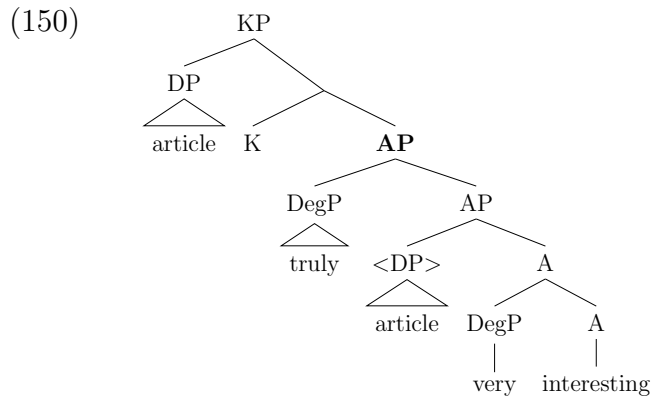
However, the alternative analysis, where the 'split' pattern is derived by *baš*'truly' being merged as the highest XP in the clause, is not ruled out, and is also possible. We must assume that in this case *truly* must have been merged higher than the temporal adverb, as shown in (151). Knowing what exactly this position is, is not relevant for the present purpose.

(151)

DegP TP
very/truly/terribly AdvP TP
yesteday T BeP
be AP
DP A
article interesting
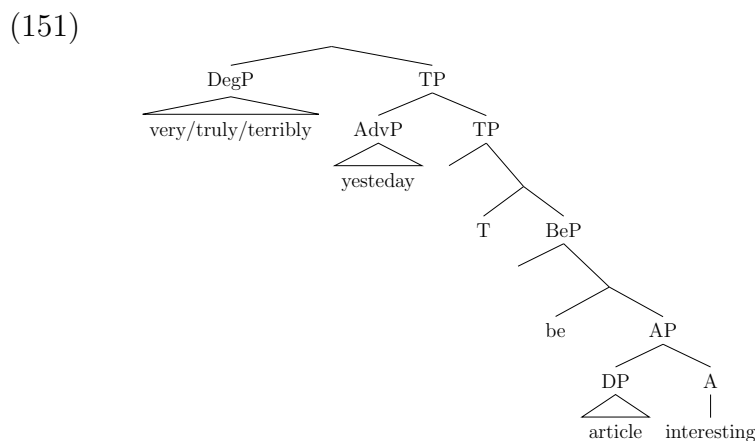
Vrlo 'very'. To test for the merge position of *vrlo*'very', I will use a Q-float test with a quantified subject *svi profesori*'all professors'. The determined position of the subject via Q-float test will be taken to help in a diagnostic of a position of the degree adverb.

I use a temporal adverb *danas*'today' to mark the position of adjunction to spec TP. What we see in the data is that the quantifier *svi*'all' can be stranded in two positions: one which is immediately following the temporal adverb ((152-b)), and the other where the quantifier immediately follows *very* ((152-c)).

(152) a. Rekao   je   da su   svi profesori danas vrlo
say.PTCP.M.SG be.PRS.3SG that be.PRS.3PL all professors today very
utjecajni.
influential
'He said that all professors today are very influential.'

    b. Rekao   je   da su   profesori danas **svi** vrlo
say.PTCP.M.SG be.PRS.3SG that be.PRS.3PL professors today all   very
utjecajni.
influential
'He said that all professors today are very influential.'

    c. Rekao   je   da su   profesori danas vrlo **svi**
say.PTCP.M.SG be.PRS.3SG that be.PRS.3PL professors today very all
utjecajni.
influential
'He said that all professors today are very influential.'

I assume the stranded quantifier shows two subject positions. The one immediately following the temporal adverb is consistent with a spec TP position (given the assumption that the temporal adverb is adjoined to spec TP (see e.g. Bošković [8]), and the other position where the quantifier follows *very*, the subject must be in a lower position, either in the external merge position in the small clause or in spec KP (for the latter, see 3.9.4). The analysis is indicated in (153-a) and (153-b).

(153) a. Rekao   je   da su   profesori danas [$_{TP}$**svi**
say.PTCP.M.SG be.PRS.3SG that be.PRS.3PL professors today all
~~profesori~~] vrlo utjecajni.
professors very influential
'He said that all professors today are very influential.'

    b. Rekao   je   da su   profesori danas vrlo
say.PTCP.M.SG be.PRS.3SG that be.PRS.3PL professors today very
[$_{KP/AP}$**svi** ~~profesori~~] utjecajni.
all   professors influential
'He said that all professors today are very influential.'

Although it is hard to distinguish based on (97-b) whether *very* is higher than KP or lower than it, the example sufficiently shows that *very* is compatible with a 'low' merge position (near the edge of a small clause) where it precedes the small clause subject.

The fact that *very* precedes the small clause subject in a position below spec TP suggests a non-traditional analysis where *very* merges outside the small clause, and not with the predicate that it is semantically associated with. The 'traditional' analysis of the merge position of *very* is given in **??**. The 'non-traditional' analysis of the merge position of *very* is given in (154-b).

(154) a. [$_{AP}$ article [very interesting]]

b. [very [$_{AP}$ article [interesting]]]

3.10.4 Manner and restitutive adverbs

In this subsection I show that the external merge position of a manner adverb, such as *dobar*'well' and a restitutive adverb *ponovno*'again' is adjoined to AP.

The split and unsplit data with *ponovno* 'again', are, for convenience, repeated below. (155-a) shows the split pattern and (155-b) shows the unsplit pattern.

(155) a. Ponovno **je** aktualan ovaj članak.
again   be relevant this article
'This article is relevant again.'   (the split pattern)

b. Ponovno aktualan **je** ovaj članak.
again   relevant be this article
'This article is relevant again.'   (the unsplit pattern)

The datum with the *dobar*'well' as the first element of the root clause is given in (156-a), and shows the split pattern.(156-b) shows the unsplit pattern.

(156) a. Dobro **je**   Mara odradila   posao.
well   be.PRS.3SG Mara do.PTCP.F.SG job
'Mara did the job well.'   (the split pattern)

b. Dobro odradila   **je**   posao Mara.
well   do.PTCP.F.SG be.PRS.3SG job   Mara
'Mara did the job well.'   (the unsplit pattern)

The question that the 'split' data pose is how the root initial adverb gets to this position. In 3.8, I have assumed that they undergo predicate inversion as a part of a remnant constituent, as shown in the analysis of (156-a) and (155-a) below.

(157)   a.   [$_{AP}$Ponovno ~~aktualan~~] je aktualan ovaj članak.
                again   relevant be relevant this article
                'This article is relevant again.'

        b.   [$_{VP}$Dobro ~~odradila~~]   je   Mara odradila   posao.
                well   do.PTCP.F.SG be.PRS.3SG Mara do.PTCP.F.SG job
                'Mara did the job well.'

If these adverbs prepose as a part of a remnant constituent, this suggests they must be externally merged within the sister of K (or, to put it differently, adjoined to AP). Can we prove that this is the case?

First, I show that *again*'ponovno' is a 'low' adverb. (158-a) shows that *ponovno*'again' is compatible with a low merge position in a structure by the fact that it can occur inside a DP in a complement of a preposition. In comparison, 'high' adverbs, such as *vjerojatno*'probably' or *iskreno*'frankly' cannot occur within a DP complement of a preposition (cf.(158-b)/(158-c)).

(158)   a.   O   svim **ponovno** aktualnim knjigama
                about all   again   relevant   books
                'about again relevant all books'

        b.   *O   svim **iskreno/vjerojatno** aktualnim knjigama.
                about all   frankly/probably   relevant   books
                intended: 'Frankly/Probably, about all relevant books.'

        c.   **Iskreno/Vjerojatno**, o   svim aktualnim knjigama.
                frankly/probably   about all   relevant   books
                'Frankly/Probably, about all relevant books.'

In a clause, *ponovno*'again' can occur below 'be' and higher than the small clause ((159-b)), thus, confirming that it can be a low merged adverb.

(159)　　a.　Rekao je da　će biti　**ponovno** sve knjige aktualne.
　　　　　　said　be that will be.INF again　　all　books relevant
　　　　　　'He said that all books will be relevant again.'

　　　　b.　Rekao je da　će biti　**ponovno** [_{AP}sve knjige aktualne].
　　　　　　said　be that will be.INF again　　all　　books relevant
　　　　　　'He said that all books will be relevant again.'

The datum in (159-a), however, does not disambiguate between the two possible low
merge positions of *again*, since we do not know where the post-verbal subject is sit-
uated. One possibility, given the position of the subject, is that in (159-a), *again* is
adjoined to KP (a position occupied by a raised small clause subject) or to AP, which
contains the subject in its external merge position.

To disambiguate the position of *again*, I will strand the quantifier by moving the
associated DP, as shown in (160-a) and (160-b).

(160)　　a.　Rekao je da　će biti　knjige **ponovno** sve　　aktualne.
　　　　　　said　be that will be.INF again all　　　books relevant
　　　　　　'He said that all books will be relevant again.'

　　　　b.　Rekao je da　će knjige biti　**ponovno** sve　　aktualne.
　　　　　　said　be that will be.INF again all　　　books relevant
　　　　　　'He said that all books will be relevant again.'

What we see in (160-a) is that the DP associated with the quantifier can occur be-
low *biti*'be', and preceding the adverb. The position of a subject below *biti*'be' is
compatible with a spec KP position (for this conclusion see section 3.9.4.1). If the
DP associate in (160-a) is in spec KP, it means that the quantifier must have been
stranded in the external merge position in the small clause. If this is the case, then
again which precedes the stranded quantifier must be adjoined to a small clause AP.

In a similar manner, I probe the merge position of *dobar*'well' by a Q-float test.

There are two positions that *well* can occur in. (161) shows the position of a quantified
subject following the manner adverb. (161-b) shows the quantified subject preceding
the manner adverb. (161-c) shows that when the subject follows the adverb, the

quantifier associated with it can be stranded below *dobar* 'well'.

(161) a. On misli   da su   **dobro** svi studenti odradili
           he think.PRS.3PL that be.PRS.3PL well   all students do.PTCP.M.PL
           posao.
           job
           'He thinks that all students did the job well.'

       b. On misli   da su   svi studenti **dobro** odradili
           he think.PRS.3PL that be.PRS.3PL all students well   do.PTCP.M.PL
           posao.
           job
           'He thinks that all students did the job well.'

       c. da su   studenti **dobro** svi odradili   posao.
           that be.PRS.3PL students well   all do.PTCP.M.PL job
           'He thinks that all students did the job well.'

The stranded quantifier in (161-c) can be showing either a position of a subject in spec KP or a position of a subject in its external merge position in a small clause, suggesting that *dobar* 'well' can be merged either at the edge of a KP or the AP.

To summarize, I have identified two possible merge regions for degree adverbs; one lower than the site of complex predicate formation and one higher than a temporal adverb. Crucially, I have established that *vrlo* 'very' has a low merge position (adjoined to a small clause (i.e KP/AP)).I have also shown that traditionally 'low' adverbs *again* and *well* can be associated with a 'low' merge position in a small clause.

Having discussed the distribution of adverbs in the split patterns, we are now equipped to proceed to the derivation of the data I presented in section 3.1.

3.11   Derivations of patterns of predicate preposing with intransitive adjectival predicates

In this section I show the complete analysis of split and unsplit patterns of predicate preposing with adjectival predicates that do not take a complement (thus, **intransitive**

adjectival predicates) and which, when modified, are modified by a **degree** adverb.

In section 3.9.3, I have determined a 'low' external merge positions of *vrlo* 'very'. The 'low' external merge position, I will assume is adjunction to a small clause (AP).

In the derivation of the patterns with modified predicates, I assume two options of preposing related to whether the head of the small clause pied-pipes the small clause material along or whether it preposes on its own.

– If the head of the small clause pied-pipes the sister of K, we derive the unsplit pattern with modified predicates.

– If the head of the predicate preposes on its own, we derive the split pattern with a modified predicate.

In the following subsection, I spell out the steps of the derivation in the clause.

3.11.1   The steps of the derivation

First, I spell out steps of the derivation *minimally* required in a root and a non-root clause.

1. subject raising to a case position (KP)

2. Complex predicate formation with *be*

3. Be to T

4. Predicate inversion

5. T to Aux[16]

6. merger of Force

7. root 'attraction'

---

[16]By Aux, I label a position above TP where *je* is spelled out

(2&4) are operations involved in predicate preposing. In section 3.7, I assumed that complex predicate formation is not optional and that both split and unsplit APs undergo complex predicate formation with *be*. In the derivation of split predicates, the head of the AP undergoes complex predicate formation via head adjunction to *be*. In the derivation of the unsplit pattern, the entire AP preposes to spec BeP.

I also assume that whenever a predicate preposes, it must prepose to spec TP via predicate inversion following Moro [2]. In section 3.7, I have shown that in a predicate-subject order modified, unmodified APs and AP remnants become spec TP subjects, which supports Moro [2]'s analysis of predicate preposing.

(3&5) are operations involved in the movement and spell-out of the copula. In Chapter 2, I have assumed that there is a chain formation between Be, T and a position in the 'clitic region' (which I label here as Aux). The clitic region is the domain of the clause higher than TP. In this position of the clause, the present third person singular 'be' is spelled out as *je*. The position of *je* higher than TP has been motivated in Chapter 2 and follows from the linear order in a non-root clause which visibly shows that *je* must precede the raised subject.

(1) has to do with the position of the small clause subject. In section 3.8, I have motivated the analysis where the subject vacates the AP and undergoes a short move below TP, to, I assume, a case position. The KP has been motivated by the rich case morphology that subjects and predicates in the language show (Bittner and Hale [42]).

(6) has to do with the projections contained within the root clause. In Chapter 2, I have assumed following Rizzi [25], that Force is contained both in the left periphery of a root and a non-root clause. The difference is that in the declarative root clause nothing is merged under Force, whereas in the non-root clause, complementizers are externally merged in Force.

(7) distinguishes the root from the non-root clause in terms of what occupies the '1st' position'. In Chapter 2, I have motivated the analysis of the root clause based on verb second Germanic, and have assumed that root clauses have an additional node,

namely root, which has an undifferentiated EPP feature that can be checked by an XP of any kind. It is the EPP on T that attracts the XP via *attract closest* to spec rootP. Whatever comes to be in spec rootP will, linearly, show up in the '1st position' in the root clause.

Equipped with the assumptions on how the derivation proceeds in a root clause, in the following section, I illustrate a step by step derivation of the split pattern in the root clause. The derivations of other patterns, namely the unsplit and unmodified in the root and the split, unsplit and unmodfied in the non-root clause are given in the Appendix A.

3.11.2 The analysis of the root clause

In what follows I show the derivation of the split, unsplit and unmodified pattern with the AP preposing in the root clause.

The steps of the derivation are given as follows:

The root clause

1. external merge of K

2. subject raising

3. external merge of Be

4. complex predicate formation

5. external merge of T

6. Predicate inversion

7. Be to T

8. external merge of Aux

9. T to Aux

10. external merge of Root

11. 'root attraction' to spec RootP

3.11.2.1 The split pattern

The datum to be derived is for convenience repeated in (162).

(162)   Vrlo/skroz **je**   zanimljiv   ovaj članak.
           very/totally be.PRS.3SG interesting this article
           'This article is very/totally interesting.'

The structure of the small clause is given in (163).
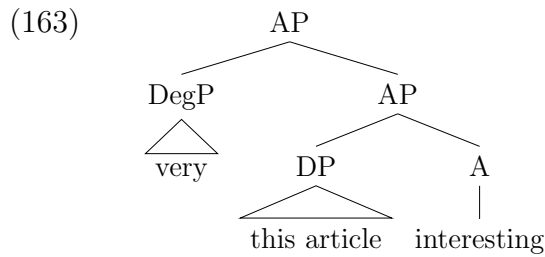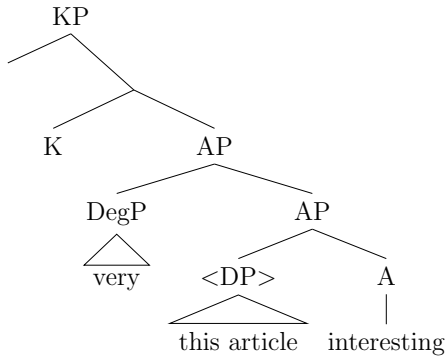
(163)

```
                AP
          ┌─────┴─────┐
        DegP          AP
         △        ┌────┴────┐
        very     DP         A
              ┌───┴───┐      │
          this article  interesting
```

Step 1: external merge of K

```
       KP
    ┌───┴───┐
    K       AP
        ┌────┴────┐
      DegP        AP
       △       ┌───┴───┐
      very   <DP>       A
           ┌──┴──┐      │
      this article  interesting
```

Step 2: internal merge of the DP subject to spec KP
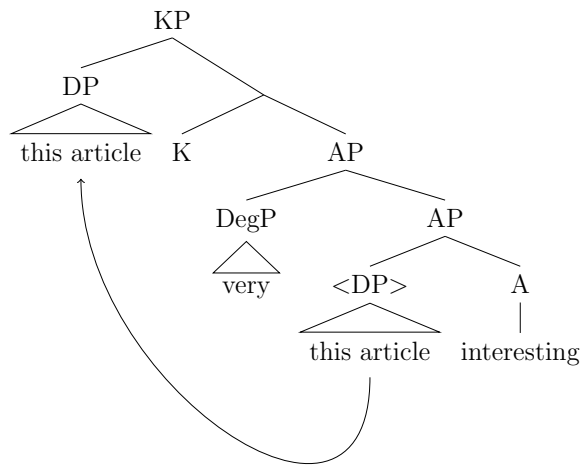
: external merge of Be
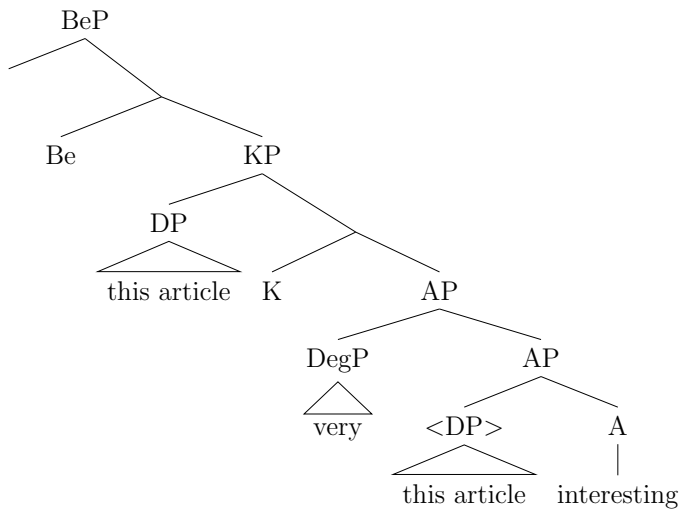
Step 4: **complex predicate formation**. The the head of the AP incorporates into *Be*
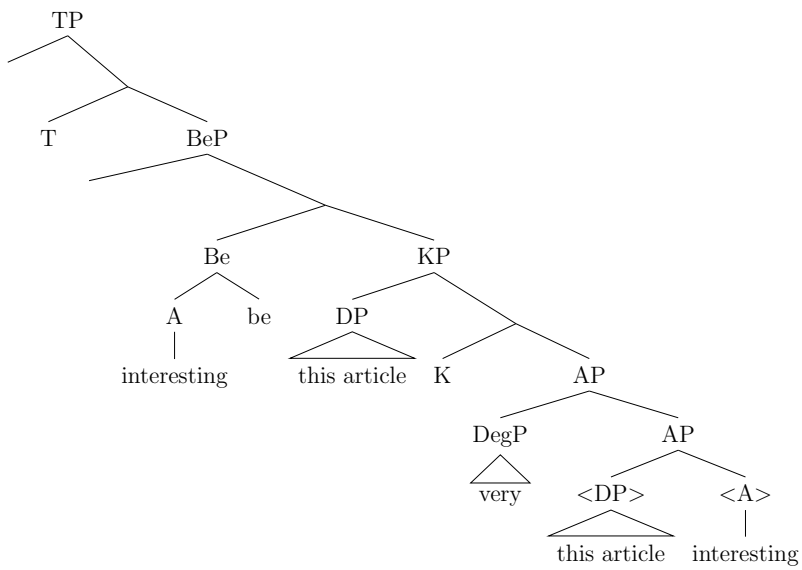
162

Step 5: external merge of T

Step 6: internal merge of Be into T
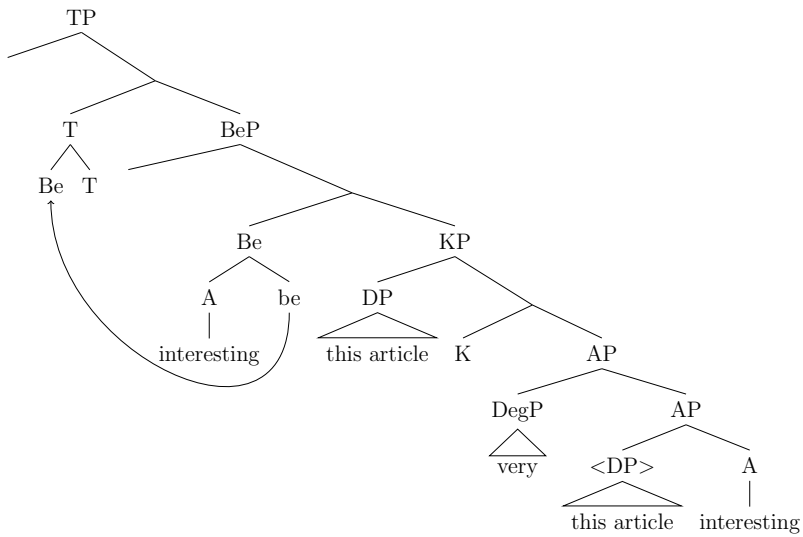
Step 7: **predicate inversion**. The degree adverb is pied-piped by the AP remnant to spec TP
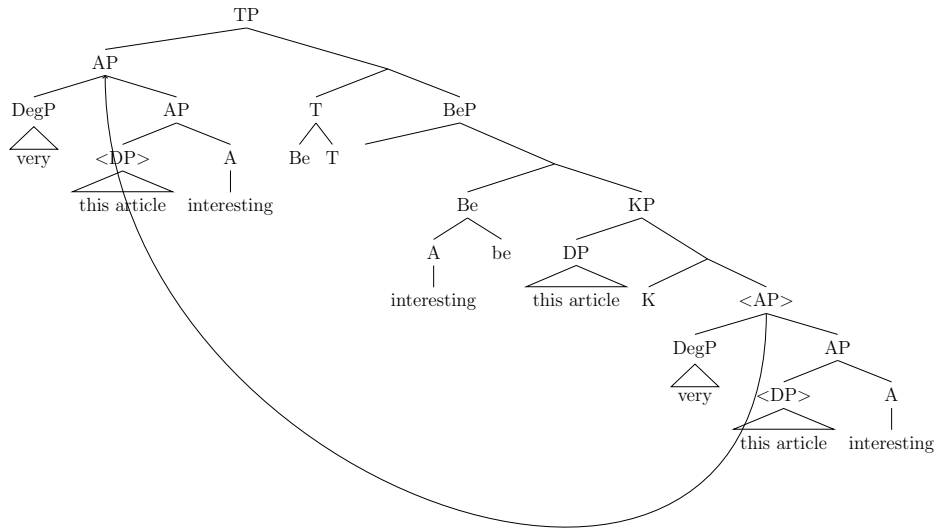
Step 8: external merge of Aux
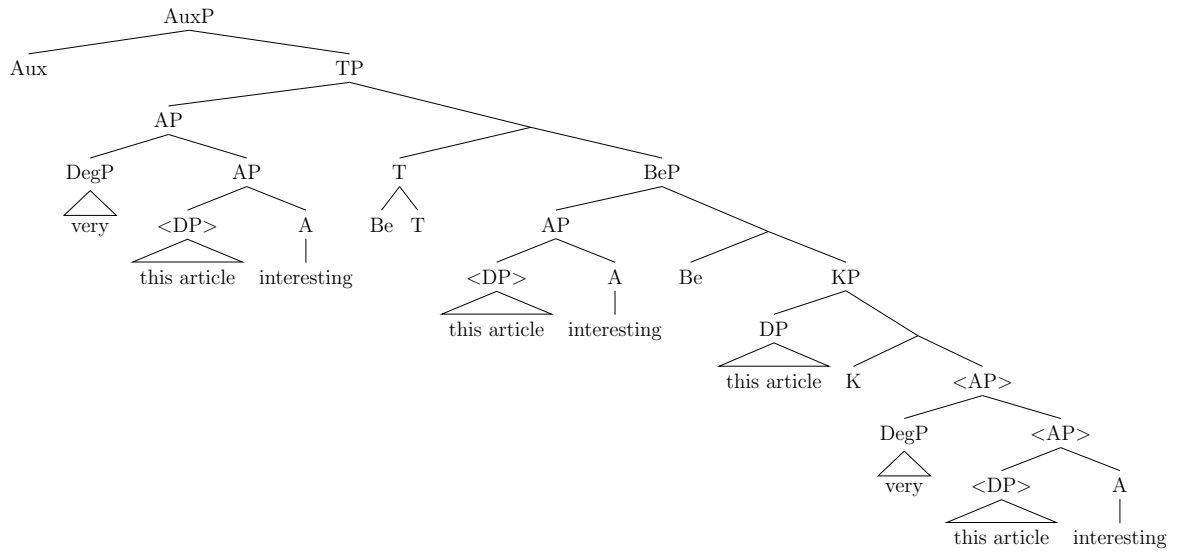
Step 9: internal merge of Be-T complex to Aux (not shown in the tree)

Step 10: external merge of root

165
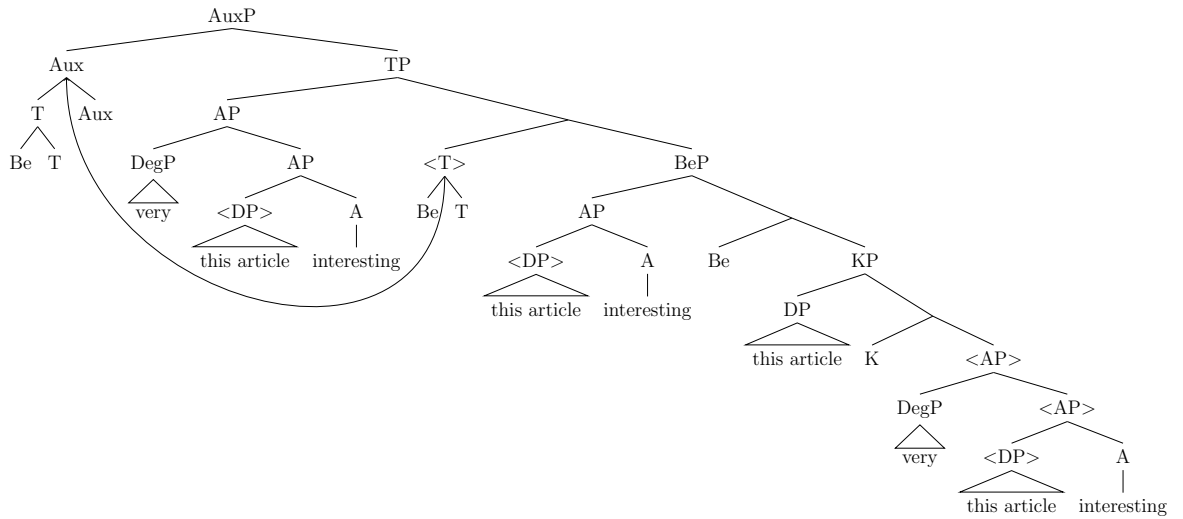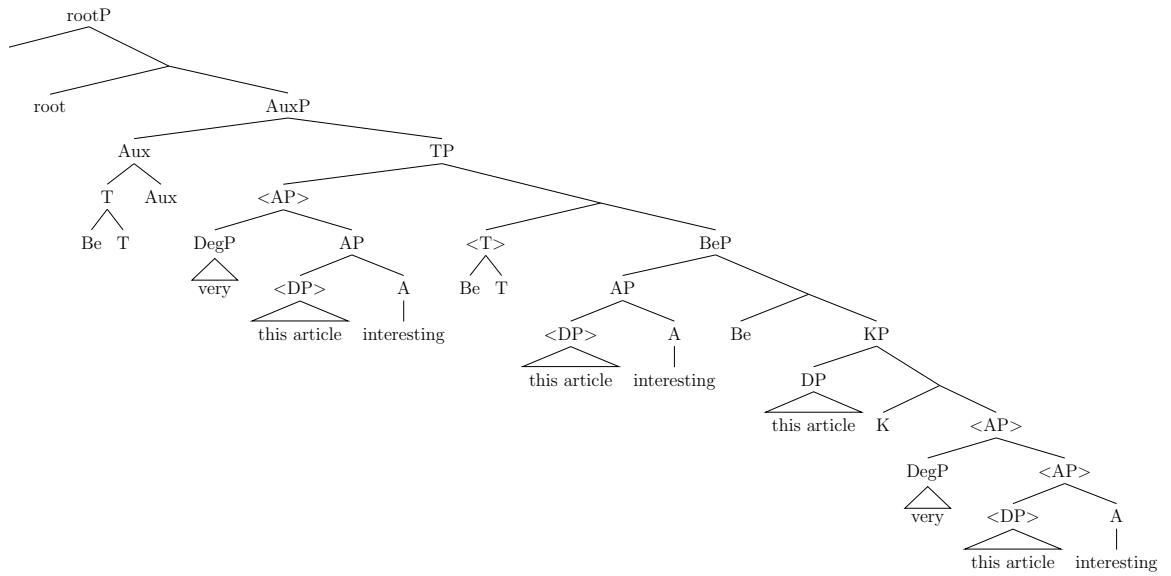
Step 11: attraction of the closest XP to spec rootP. The closest XP is the AP in spec TP.
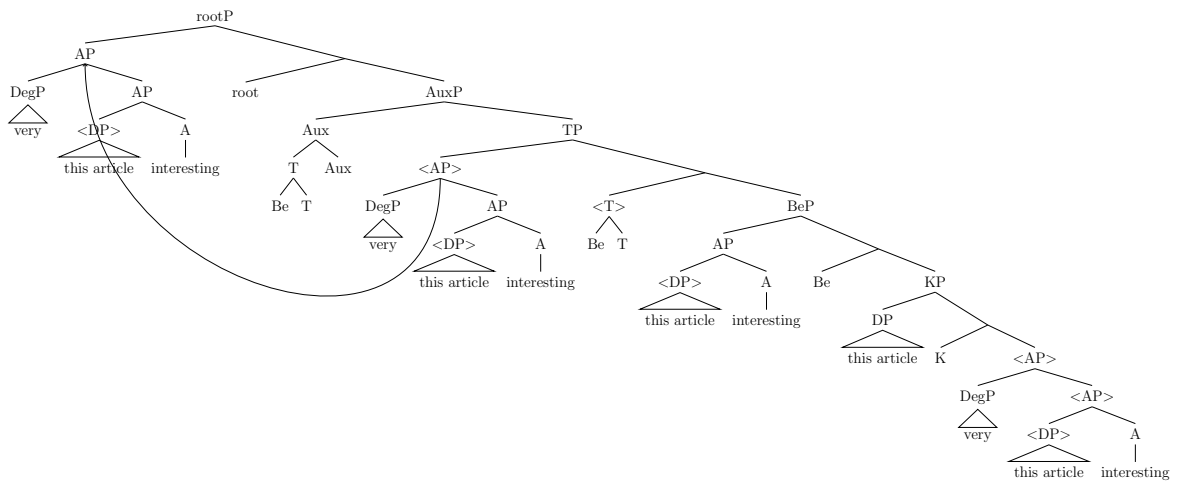
The step 11 derives the split pattern in the root clause.

The rest of the derivations are given in the Appendix A.

3.12 Alternative syntactic derivation: left branch extraction and remnant predicate preposing

In this section I briefly explore the possibility that 'splitting' with predicates more generally could have been derived by some other syntactic mechanisms, such as *left*

branch extraction, for instance (Bošković [48], Talić [46]).

It is a well known fact about Serbian and Croatian that both allow the left branch condition violation (Ross [49]). This is illustrated in the examples below, where the leftmost element within a DP gets separated from the rest of the DP it is associated with. The availability of left branch extraction as a syntactic mechanism in Croatian is linked to the fact that Croatian lacks articles (and, consequently, a DP projection)[17].

(164)   a.   **Čiji**   danas članak Mara čita?
                whose today article Mara read.PRS.3SG
                'Whose article does Mara read today?'

         b.   **Kakav**   je   kolač Mara danas pojela?
                what.kind be.PRS.3SG cake Mara today eat.PTCP.F.SG
                'What kind of cake did Mara eat today?'

         c.   **Koji** je   čovjek izmislio   bitcoin?
                which be.PRS.3SG man   invent.PTCP.M.SG bitcoin
                'Which man invented the bitcoin?'

Could left branch extraction be implicated in the split predicate cases, instead of complex predicate formation and predicate inversion as I claim? Talić [46], for instance, assumes that left branch extraction derives 'split' predicate cases such as (165-a). Talić [46]'s analysis of (165-a) is given in (165-b).

(165)   a.   Strašno sam   bila   umorna.
                terribly be.PRS.1SG be.PTCP.F.SG tired
                'I was terribly tired.'   (example from Talić [46])

         b.   Strašno sam   bila   [$_{AP}$~~strašno~~ umorna].
                terribly be.PRS.1SG be.PTCP.F.SG terribly   tired
                'I was terribly tired.'

---

[17]The analysis of left branch extraction, in the context of NP/DP generalization (Bošković [48]) is given in Talić [46].The main assumption is as follows. DPs are phases, and given phrase impenetrability condition (PIC), extracting out of DPs must proceed via spec DP. Movement to spec DP crosses over only a segment of a D not a full projection, which violates antilocality (Grohmann [50]). Croatian NPs do not have a DP layer dominating them. Under assumption that NPs and APs are phases (Bošković [51]), movement of the degree adverb/the leftmost nominal modifier merged at the phasal edge is not prohibited by antilocality or PIC. Thus, Croatian allows discontinuities of predicates and arguments which do not generally exist in languages with articles.

The assumption behind the left branch extraction analysis is that it is a 'splitting' mechanism that uniformly derives split arguments and predicates. The question is whether we can show that predicates are not split by the left branch extraction of the adverb, as assumed by Talić [46], but in a way I have assumed in the current chapter.

The evidence that points to left branch extraction and predicate remnant creation as two distinct syntactic mechanisms, such that the former derives discontinuous arguments and the latter derives discontinuous predicates, is coming from Bulgarian. Bulgarian, as opposed to Croatian, is a language that does not allow left branch extraction from DPs, as shown in (166).

(166)   a. Čiya   statiya Mariya čete   dnes?
            whose article Mary   read.PRS.3SG today
            'Whose article Mary reads today?'

        b. *Čiya   dnes   statiya Mariya čete?
            whose today article Mary   read.PRS.3SG
            intended: 'Whose article Mary reads today?'

However, Bulgarian allows 'splits' with predicates with a non-clitic 'be' verb *beše* 'be-past' (bolded in the examples) (the data are from Roumyana Pancheva, pc). (167) shows 'split' and unsplit APs containing one modifier, and (168) and (169) show split APs containing two modifiers.

(167)   a. Mnogo **beše**   interesna tazi statija
            much   be-past.3sg interesting this article
            'This article was very interesting'

        b. Mnogo interesna **beše**   tazi statija.
            much interesting be-past.3sg this article
            'This article was very interesting'

(168)   a. Tolkova mnogo **beše**   interesna tazi statija.
            that   much be-past.3sg interesting this article
            'This article was so interesting'

        b. *Tolkova **beše**   mnogo interesna tazi statija.
            that   be-past.3sg much interesting this article

'This article was so interesting'

(169)   a.   Tolkova lošo **beše**   napisana tazi statija.
            that   badly be-past.3sg written   this article
            'This article was so badly written'

          b.   ?Tolkova **beše**   lošo   napisana tazi statija.
            that   be-past.3sg badly written   this article
            'This article was so badly written'

The Bulgarian data show that a mechanism different than the left branch extraction out of DPs must be involved in predicate splitting with 'be'. Given that splits above involve 'be', it seems reasonable to assume that there is a step of complex predicate formation where the adjectival predicate forms a complex with 'be', followed by the predicate remnant preposing which contains the degree modifiers, as I proposed is the analysis for 'split' APs in Croatian.

The analysis of (169-a) which involves the two mechanisms is shown as follows. Complex predicate formation with 'be' is shown in (170), and predicate inversion to spec TP is shown in (171).

(170)

(171)

```
                          TP
               ┌───────────┴───────────┐
              AP                        │
        ┌──────┼──────┐         ┌───────┴───────┐
      DegP     A       T       BeP
    ┌───┴──┐   │              ┌──┴──────────┐
   Deg    Deg  napisana      be             AP
    │      │              ┌───┴───┐     ┌────┴────┐
  tolkova lošo            A     be    DegP        A
                          │         ┌──┴──┐       │
                       napisana    Deg   Deg   napisana
                                    │     │
                                 tolkova lošo
```
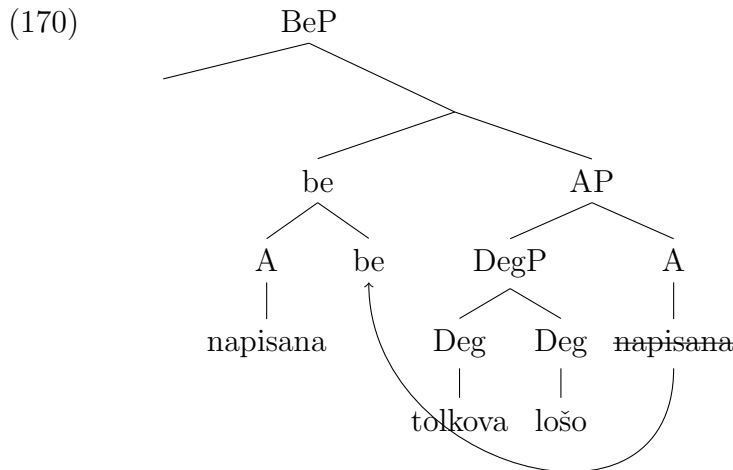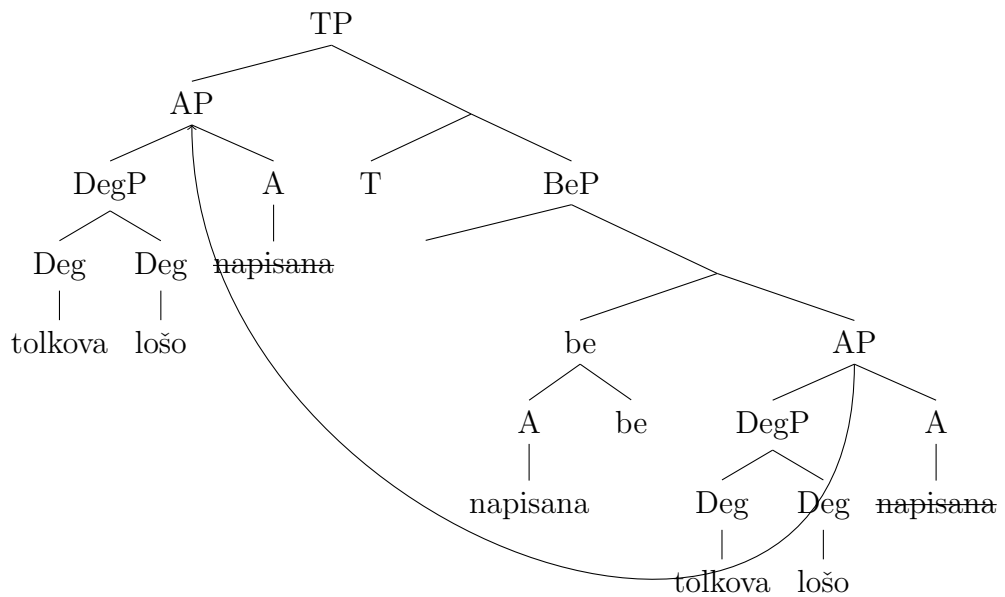
To summarize, the Bulgarian data show that predicates must be 'split' by a mechanism that cannot be the left branch extraction given that in the language DPs (for which the left branch extraction operation was motivated in the first place) cannot be 'split'. The data point to the well known generalization by which, syntactically, predicates differ from arguments in that they allow complex formation with 'be', whereas arguments do not form such complexes (e.g. Baker [44]).

3.13 Focused orders with arguments and predicates

Given the assumption motivated in the previous section that predicates are split by a different syntactic operation than arguments, we are equipped to provide the analysis of the two focused orders mentioned at the beginning of the Chapter and repeated here for convenience. (172-a) shows the embedded clause with a focus on the argument. The demonstrative which bears the focus and precedes *je* in the embedded clause has subextracted from within the argument. (172-b) shows the embedded order where the

degree adverb is focused and preposed to a position preceding *je*.

(172) a. On misli   da OVAJ **je**   članak vrlo/skroz
           he think.PRS.3SG that this   be.PRS.3SG article very/totally
           zanimljiv.
           important
           'He thinks that THIS article is very/totally interesting.'

       b. da VRLO/SKROZ **je**   zanimljiv ovaj članak.
           that very/totally   be.PRS.3SG interesting this article
           'that this article is VERY/TOTALLY interesting.'

Given the discussion in the previous section, I have concluded that predicates and arguments when they are split must be split by different syntactic mechanisms. Arguments, I assume, are split via left branch extraction. Predicates, on the other hand, are split by complex predicate formation and predicate inversion.

The left branch extraction analysis of (172-a) is given in (173).

(173)
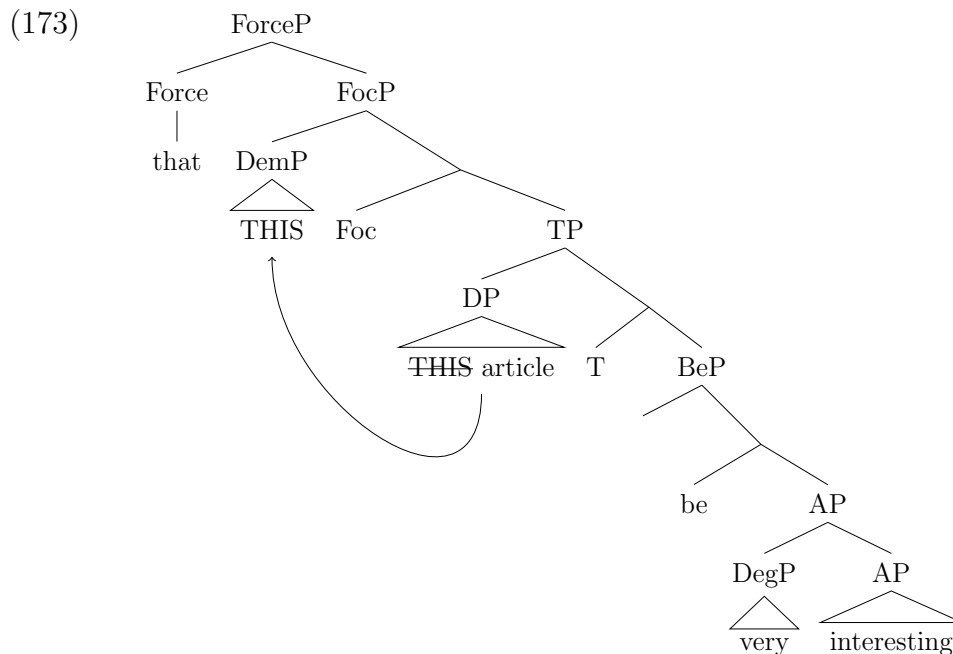
The analysis of split predicate as in (172-b) is given in (174)-(175). First, the head of the AP incorporates into 'be', as shown in (174). The subject of a small clause is

171

omitted for structural simplicity.

(174)

```
                    BeP
                 /        \
              be            AP
            /    \        /     \
           A     be    DegP      AP
           |            /\        |
      interesting    VERY         A
                                  |
                              interesting
```
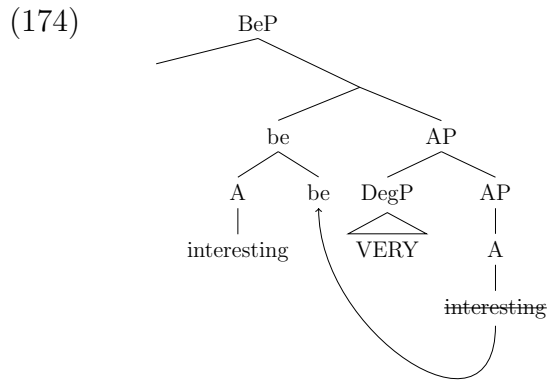
Then, the AP remnant which contains the focused degree adverb preposes to spec FocP from spec TP, where it has inverted to first, as shown in (175).

(175)

```
                    ForceP
                 /         \
            Force           FocP
             |            /       \
           that         AP          FocP
                      /    \      /      \
                   DegP     A   Foc        TP
                    /\      |           /      \
                 VERY  interesting    AP         TP
                                    /   \      /    \
                                 DegP    A    T      BeP
                                  /\     |          /    \
                               VERY interesting   be       AP
                                                 /   \    /    \
                                                A    be DegP    A
                                                |        /\     |
                                           interesting VERY  interesting
```
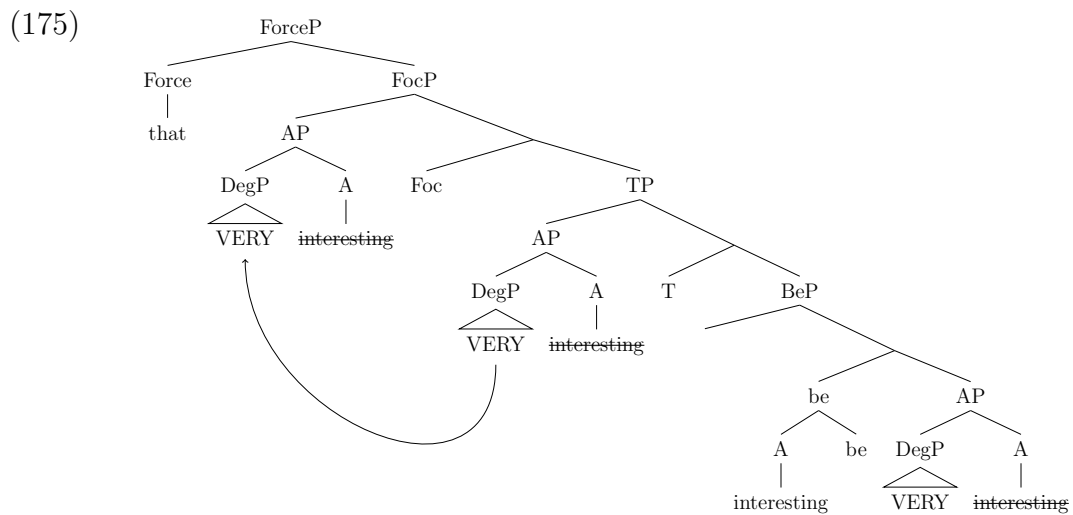
3.13.0.1 The summary

In this section, I have proposed the analysis of predicate preposing with intransitive adjectival predicates when a predicate is either modified by a degree adverb or unmodified.

3.14   Conclusion

In this chapter I have developed a syntactic analysis of the clausal structure and I have accounted for the patterns of predicate preposing.

I have shown empirical evidence why the split patterns involving clitics must be analyzed in syntax.

The two main mechanisms that are involved in the patterns of preposing which involves APs, complex predicate formation and predicate inversion have been motivated by the crosslinguistic data and analyses. Given the two mechanisms (and additional independently motivated operations in Croatian, such as pied-piping), I have shown how AP inversion with intransitive APs is derived uniformly in syntax. Finally, I argued that argument splitting must involve a different syntactic mechanism from predicate splitting. Such a conclusion has been supported by the Bulgarian data, and crosslinguistically inspired theoretical proposals such as Baker [44].

CHAPTER 4

Conclusion

Clitics in Croatian are Wackernagel or 'second position' clitics. This means that in addition to following a syntactic constituent in a linear order, they can occur following the '1st prosodic word' in a sentence which yields, superficially, 'split' constituents. Constituents split by the clitic raise the question of whether 'second position' phenomenon in Croatian can be resolved uniformly in a single component of the grammar or should the problem be dealt at the syntax-phonology interface, where the clitic placement inside a constituent is resolved via post-syntactic lowering. The interface solution has been a dominant solution in the literature, since Halpern [10], Schütze [9], and including Bošković [8] and, most recently, Diesing and Zec [1].

In this dissertation I look closely at AP predicate data in Diesing&Zec based on which I motivate a syntactic analysis of predicate preposing and consequently 'split' patterns with AP predicates. In Section 3, I proposed syntax of predicate preposing with modified and unmodified **intransitive** adjectival predicates.

The reason I focused on the analysis of the *predicate* data in particular is twofold. First, their syntax is less discussed in the Slavic clitic literature as opposed to the syntax of arguments. Second, while the argument data already have a plausbible syntactic analysis, the predicate data has been used by Diesing and Zec [1] to motivate post-syntactic analysis of clitic position in split predicates and split constituents more generally. In this thesis I have shown that using predicate data to motivate the post-syntactic analysis of clitic placement is not justified.

The main argument for assuming a syntactic analysis of split predicates is **raising to subject data**, which I presented in detail in Chapter 3.

The raising data crucially show that predicate modifiers, such as the degree adverbs raise as a part of a predicate remnant across the non-finite clause boundary in the complement of the raising predicate.

This was taken to suggest two things: first, that the separation of the modifier from the predicate must have occurred early in the derivation, and second, that the splitting occurred via syntactic means, otherwise the correct output cannot be generated. In Chapter 3, I showed in detail how the post-syntactic analysis a la Diesing and Zec [1] makes wrong predictions regarding the possible linear orders.

The analysis of split predicates and predicate preposing more generally, which I further motivate in Chapter 3, consists of two typologically motivated syntactic operations:

1. **Complex predicate formation** which I implemented both as a head adjunction of the small clause predicate to 'be' and as an XP predicate movement into spec BeP.

2. **Predicate inversion**, which I define as a movement to spec TP, following Moro [2].

    I departed from Moro [2]'s analysis of raising in a copular construction by showing that the small clause subject always vacates the small clause to a case position (spec KP).

    As a consequence, a constituent that preposes first through spec BeP and then to spec TP is always a *remnant constituent*.

The wider syntactic context of predicate preposing is a **root** and **non-root** clause, the functional hierarchy of which I motivate in Chapter 2. Although the thesis was predominately concerned by the position of the finite third person copula *je*, the analysis of the 'second position' as a linear effect I proposed in Chapter 2, naturally extends to the second position effect involving pronominal, and other verbal clitics.

The dissertation shows that the 'second position' phenomenon in Croatian can be accounted for entirely in syntax. The relevant ingredients of a syntactic analysis I

proposed in this thesis are as follows:

1. independently established functional hierarchy in the clause

2. independently established position of clitics in a clause

3. the syntactic account of the root/non-root asymmetry in clitic placement, where the '1st position' in the root clause is derived by exploiting the similarity with the root phenomenon in Germanic.

In Chapter 3, I have also shown that an alternative syntactic mechanism, such as left branch extraction (Bošković [48],Talić [46]) cannot be motivated to derive both split predicates and split arguments. Split predicates, as motivated by the Bulgarian data, must be analysed as involving complex predicate formation with 'be' and remnant predicate inversion to spec TP. This is consistent with the analysis I motivate for the split AP data in Croatian.

4.0.1   XP preposing to '1st position' is not PF driven

In this section I briefly address the analysis in Wilder and Ćavar [22] where the authors claim that movement to the '1st position' preceding the clitics in the root clause is PF-triggered in order to accomodate the requirement of a clitic to have a prosodic host to its left.

So why is it, beside the already proposed syntactic arguments, unnecessary to claim that internal merge to the first position in the root clause is PF-triggered, as Wilder and Ćavar [22] claim? Given that a very similar syntactic analysis to the one I propose in Chapter 2 derives the verb second effect for which hardly anyone would assume a post-syntactic analysis, there is no reason to assume that the 'clitic second' in Croatian must be regarded as a PF requirement.

The analysis, which makes the linear second position effect fall out from the syntactic properties of the clause, and not from the prosodic properties of the clitic, is further

supported by the data from a dialect of Croatian spoken in the city of Rijeka, which is my native dialect.

The clitics in the dialect, by all distributional tests presented in this thesis, count as 'second position' clitics. What this dialect allows, however, is for the clitics to occur clause initially, in *yes-no* questions.

Some examples are given below. (1-a) and (1-b) show a finite copula 'be' in a sentence initial position. (1-c) and (1-e) show the pronominal clitic in a sentence initial position. (1-d) shows a future auxiliary clitic in the '1st position'.

(1)   a.   **Ste**   stigli?
           be.PRS.3PL arrive
           'Did you arrive?'

      b.   **Si**   čuo?
           be.PRS.2SG hear.PTCP.M.SG
           'Did you hear?'

      c.   **Mu**   treba   šta?
           him.CL.DAT.M need.PRS.3SG what
           'Does he need anything?'

      d.   **Ćemo**   vidjet.
           will.FUT.1PL see.INF
           'We will see.'

      e.   **Ga**   trebate   nešto?
           him.CL.ACC.M need.PRS.2PL something
           'Do you need him for something?'

Even more compelling argument against the assumption that clitics in Croatian need a prosodic host is the example in (2), which shows that a sequence of clitics can occur in the '1st position' even in a declarative sentence.

Context: Tell her, when you see her, that she was wrong.

(2)   **Ću joj**   reć,   nema problema.
      will.fut.1sg her.CL.DAT.F.SG say.INF. no   problem
      lit. 'I will tell her that, no problem.'

The fact that the 'exceptional' 'clitic 1st' is allowed in a well defined syntactic environment in Rijeka Croatian suggests that a syntactic context determines the position of clitics in the clause and not their prosodic status.

4.0.2 Remaining problems

In this section, I briefly return to two topics: the analysis of *li* and the apparent problems that the clitic placement in multiple wh-questions pose.

4.0.2.1 *Li*

In Chapter 2, I have shown the data with the question clitic *li*. *Li* differs from other clitics in the type of a clausal environment it occurs in (e.g. yes-no questions) and in what type of XP can precede it in a root question. The relevant data are, for convenience repeated below. As seen in the data, *li* can be preceded either by *da* 'that' a complementizer that occurs in finite clauses, as shown in (3-a), or by a finite verb, as shown in (2).

(3)   a.   Hoće **li** doći?
           will   Q come.INF
           'Will he come?'   (preferred in Croatian)

      b.   Da   **li** će   doći?
           that li will.FUT.3SG come.INF
           'Will he come?'   (preferred in Serbian)

How do we account for the '1st position' in root questions containing *li*? I assume that *li* is externally merged in Force, as shown in (7). This identifies the root clause as a yes-no question.

(4)

```
            rootP
           /    \
        root   ForceP
              /     \
          Force     TP
            |       / \
           li      T
```
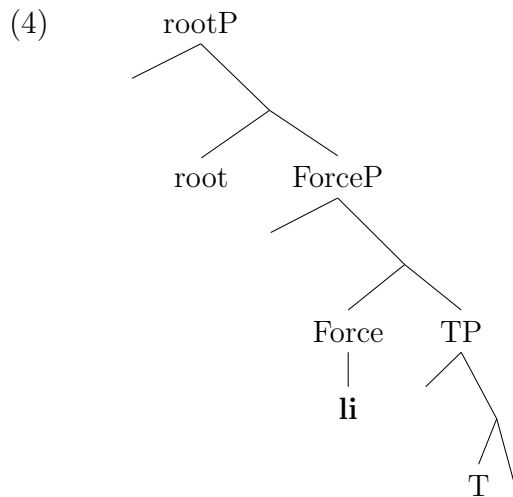
The data show that *li* requires either a finite complementizer or a finite verb to its left. This evokes an analysis where *li*, formally, requires a filled specifier by either a finite verb (*li* has EPP [+T]) or by *da*'that', in which case *li* has EPP (finite) [+C]. The former can be satisfied via attraction of the finite verb which must have been the closest XP to *li*. The latter can be satisfied by an external Merge of a complementizer in a specifier of *li*. From this position, a further movement of a complementizer and the finite verb to spec rootP is possible, which accounts for the '1st position' data in clauses with *li*.

Next, I proceed to *je* position in multiple wh-questions.

4.0.2.2 Position of clitics in multiple wh-questions

In multiple wh-questions, the clitics can occur either following all wh-phrases, as shown in (5-b) and (6-b), or by occurring between them, as shown in (5-a) and (6-a). This fact holds for both root and non-root clauses. While clitics occurring after all wh-phrases is expected given my analysis, the clitic occurring after only one of the wh-phrases is not.

(5)   a.   Pitam   se **što** je   **kada** Marko kupio.
                wonder.PRS.1SG refl what be.PRS.3SG when Marko buy.PTCP.M.SG
                'I wonder what did Marko buy and when.'

b. Pitam   se **što kada** je   Marko kupio.
   wonder.PRS.1SG refl what when be.PRS.3SG Marko buy.PTCP.M.SG
   'I wonder what did Marko buy and when.'

(6) a. **Što** je   **kada** Marko kupio?
       what be.PRS.3SG when Marko buy.PTCP.M.SG
       'What did Marko buy and when?'

   b. **Što kada** je   Marko kupio?
      what when be.PRS.3SG Marko buy.PTCP.M.SG
      'What did Marko buy and when?'

The facts in (6-a) and (5-a) are unexpected, given the fixed analysis of clitic position in a clause as argued in Chapter 2. Thus, it appears that in the examples the clitic underwent additional step of movement in order to occur between two wh-phrases.

(7)
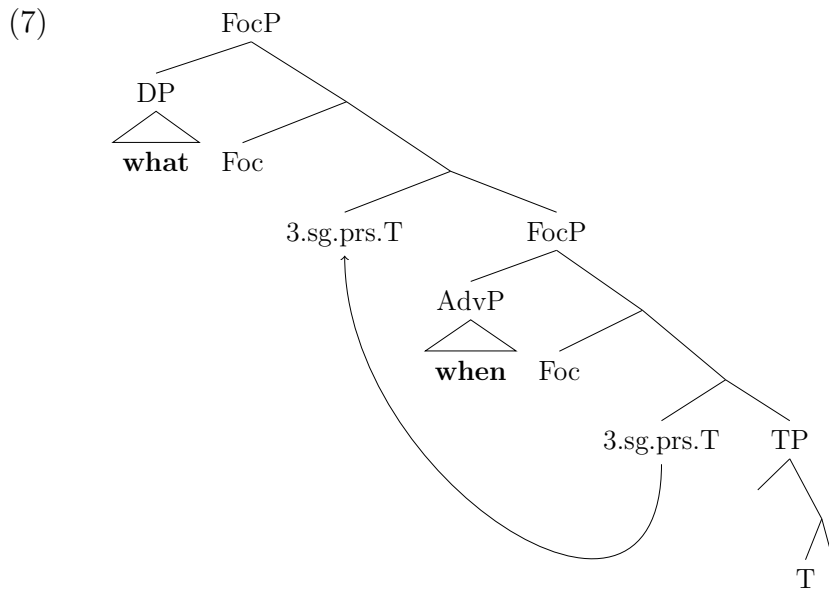
However, I would like to suggest that we need not assume that *je* optionally moves to a position outside the clitic complex. In fact, we have already seen that *je*('be') can move to a higher position in a clause, for instance, when 'be' has 1st 2, 3rd, plural person features. We have also seen that the yes/no question marker *li* precedes the higher agreement position that 'be' can reach. Putting these facts together, I suggest

that 'be' optionally moves through the higher position for 'be', into the position where *li* would be located, i.e this placement is unrelated to prosodic structure, but instead related to the distribution of 'be'. This analysis is supported by the well-known fact that finite verb forms of 'be' raise higher than the finite verbs (cf. e.g in French, which has V to T, the auxiliary raises higher that finite verbs) (e.g. Sportiche [52]).

4.0.3   For the future research

Another important finding of Diesing and Zec [1] is the generalization that predicates, irrespective of their internal structure, can be 'split' under a neutral discourse [1]. 'Splitting' with arguments, on the other hand, is sensitive to the internal structure of the argument. The data from Diesing and Zec [1] are given below.

The data in (8-a) and (8-b) show the **noun genitive construction**. When the construction is a predicate, as in (8-a), it can be 'split' by the copula, but when an argument as in (8-b), it cannot be split by the copula. With arguments, the copula must follow the entire noun genitive construction, as shown in (8-c).

(8)   a.   Članovi **su**   kluba,   a   neće da   se   takmiče.
           members be.PRS.3PL club.GEN and not   that SE.REFL compete.PRS.3PL
           'They are members of a club, but they refuse to compete.'

      b.   *Članovi **su**   kluba   dobili   nove
           members club.GEN be.PRS.3PL receive.PTCP.M.PL new
           knjižice.
           membership cards
           intended: 'Members of club received new membership cards.'

      c.   Članovi kluba   **su**   dobili   nove knjizice.
           member club.GEN.SG be.PRS.3PL receive.PTCP.M.PL new membership

           cards
           'Members of club received new membership cards.'

---

[1]The 'splitting' with predicates other than modified APs/NPs, namely noun and preposition genitive construction and coordinate construction is possible only when the subject of predication is *pro*, as for instance, seen in (8-a). I leave investigating the role of a subject in predicate splits with noun genitive and preposition genitive constructions for future research.

The data in (9-a) and (9-b) show a **coordinate structure** as predicate and as an argument. (9-a) shows that when the structure is a predicate, it can be 'split' by the copula, and (9-b) shows when the construction is an argument, it cannot be split by the copula. Instead, the copula must follow the entire coordinate structure as in (9-c).

(9)   a.   Lopovi **su**   i   varalice otkako ih   znam.
           thieves be.PRS.3PL and crooks   since   them know
           'They have been thieves and crooks since I got to know them.'

      b.   *Lopovi **se**   i   varalice uvek   nekako   snadju.
           thieves SE.REF.CL and crooks   always somehow manage
           intended: 'Thieves and crooks always somehow manage.'

      c.   Lopovi i   varalice **se**   uvek   nekako   snadju.
           thieves and crooks   SE.REF.CL always somehow manage
           'Thieves and crooks always somehow manage.'

The data in (10-a) and (10-b) show a **prepositional phrase** as a predicate and as an argument. (10-a) shows that when the prepositional phrase is a predicate, it can be 'split' by the copula, and (10-b) shows when the prepositional phrase is an argument, it cannot be split by the copula. Instead, the copula must follow the entire prepositional phrase as in (10-c).

(10) a.   Ispred   **smo**   drugih   gradova   u Srbiji.
           in front of be.PRS.1PL other.GEN.PL city.GEN.PL in Serbia
           'We are ahead of other cities in Serbia.'

      b.   *Ispred   **je**   ove   zgrade   postavio
           in front of be.PRS.3SG this.GEN.SG building.GEN.SG place.PTCP.M.SG
           znak.
           sign
           intended: 'He placed a sign in front of this building.'

      c.   Ispred   ove   zgrade   **je**   postavio
           in front of this.GEN.SG building.GEN.SG be.PRS.3SG place.PTCP.M.SG
           znak.
           sign
           'He placed a sign in front of this building.'

The first question is how the internal structure of the preposition/noun genitive predi-

cates interact with the fact that they can be 'split' by the copula. The second question is how do noun/preposition arguments differ from predicates in the fact that they cannot be split. I leave developing the syntax of split and unsplit noun/preposition genitive constructions for a future research.

APPENDIX A

Appendix

<u>Continuation of derivations in the root and a non-root clause</u>

<u>The non-root clause</u>

1. external merge of K

2. subject raising

3. external merge of Be

4. Complex predicate formation

5. external merge of T

6. Be to T

7. T to Aux

8. predicate inversion

9. external merge of the complementizer in Force

The derivation proceeds incrementally such that each step of external merge is followed either by a step of internal merge or another step of external merge.

I show the derivation of the split pattern first.

A.0.1 The analysis of the non-root clause

The datum to be derived is repeated in (1). Given the linear order, (1) is ambiguous between a split and a non-split pattern.

(1) On misli   da **je**   ovaj članak vrlo/skroz zanimljiv.
     he think.PRS.3SG that be.PRS.3SG this article very/totally interesting
     'He thinks that this article is very/totally interesting.'

The steps of the derivation required to derive the split and unsplit pattern with modified predicates in the non-root clause and the order of application of the steps is given below.

A.0.1.1 The split pattern

The assumed external merge in a small AP clause, is for convenience repeated in (2).

(2)
```
              AP
          ┌────┴────┐
        DegP        AP
         △      ┌────┴────┐
        very   DP         A
               △          |
         this article  interesting
```
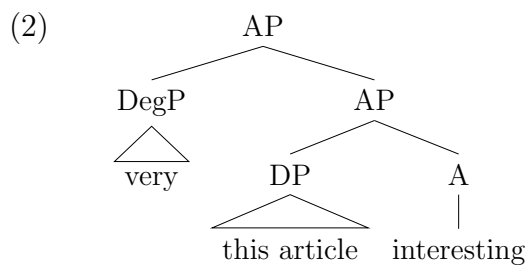
Step 1: **external** merge of K (and its projections)
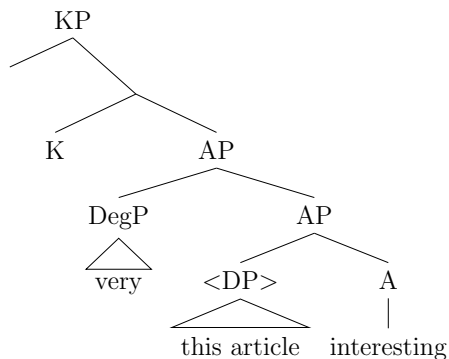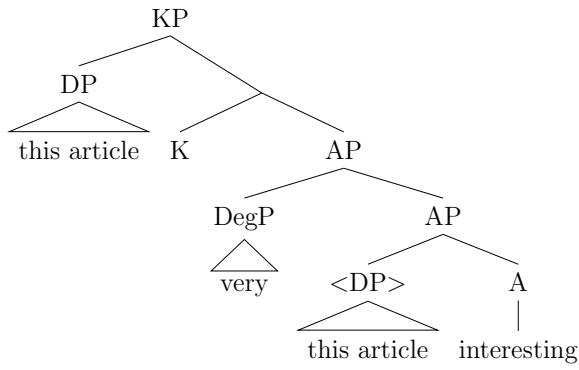
```
        KP
    ┌────┴────┐
    K        AP
         ┌────┴────┐
       DegP        AP
        △      ┌────┴────┐
       very  <DP>        A
              △          |
        this article  interesting
```

Step 2: **internal** merge of the DP subject to spec KP.

Step 3: external merge of Be
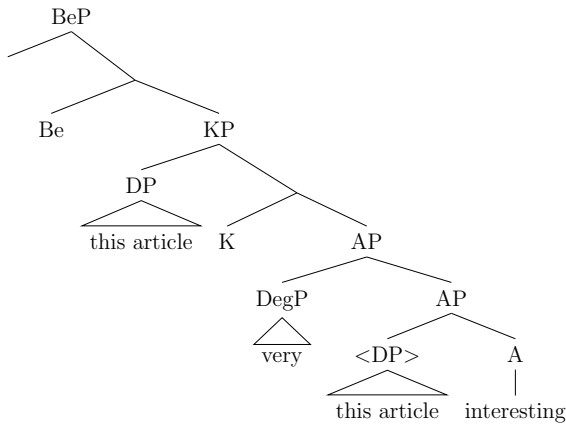
Step 4: **complex predicate formation**. *Pied-piping* option: the head of the AP pied-pipes the first maximal projection that immediately dominates it to spec BeP.

Step 5: external merge of T

TP
T
BeP
AP
<DP>
A
this article
interesting
Be
KP
DP
this article
K
AP
DegP
<AP>
very
<DP>
A
this article
interesting
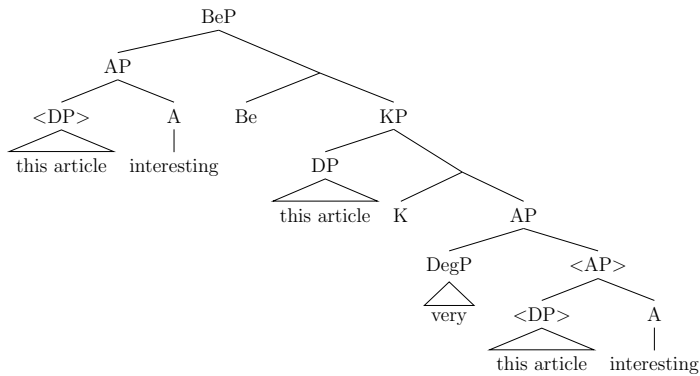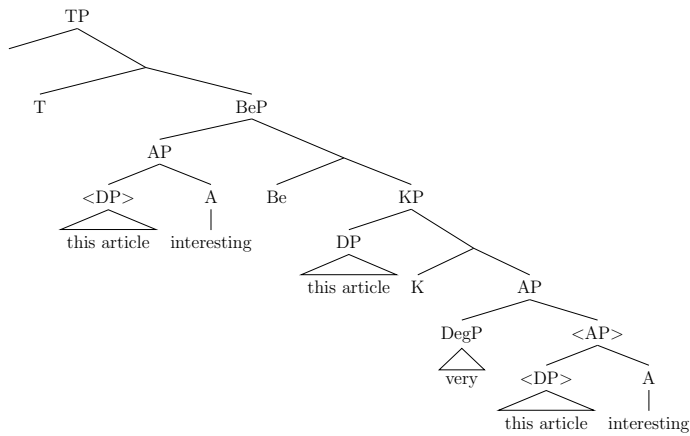
Step 6: the internal merge of Be into T

TP
T
Be T
BeP
AP
<DP>
A
this article
interesting
Be
KP
DP
this article
K
AP
DegP
<AP>
very
<DP>
A
this article
interesting
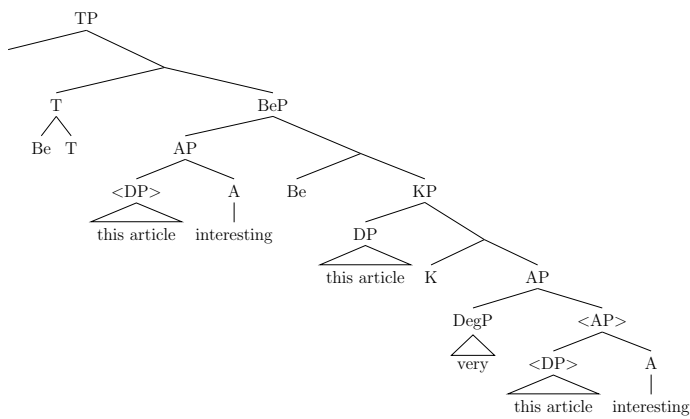
Step 7: **predicate inversion**. The degree adverb is pied-piped within an AP to spec TP.

TP
AP
DegP
<AP>
very
<DP>
A
this article
interesting
T
Be T
BeP
AP
<DP>
A
this article
interesting
Be
KP
DP
this article
K
<AP>
DegP
<AP>
very
<DP>
A
this article
interesting
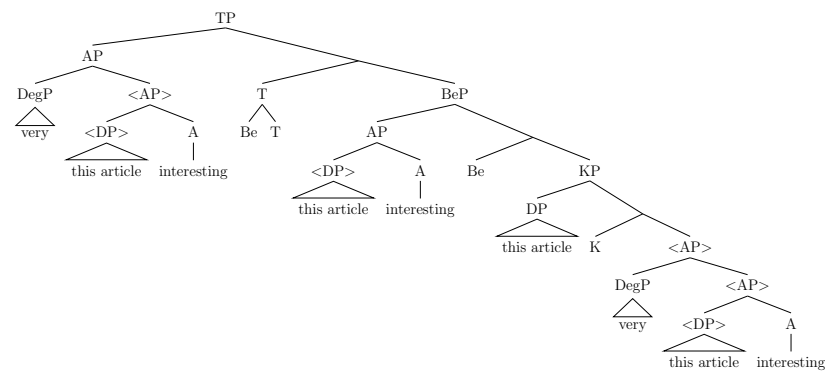
Step 8: external merge of Aux
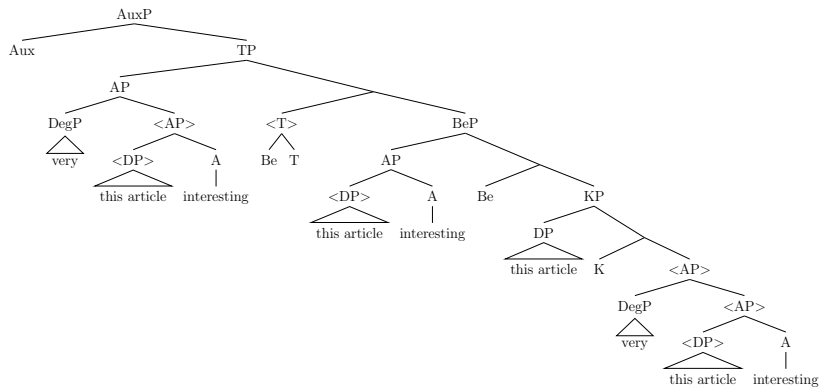
Step 9: T to Aux (and spell out of 3.pres.sg/Be-T complex as *je* (not shown))
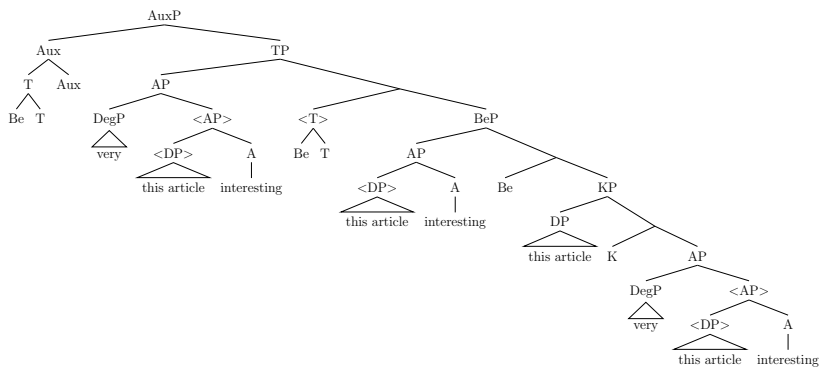
Step 10: external merge of Force
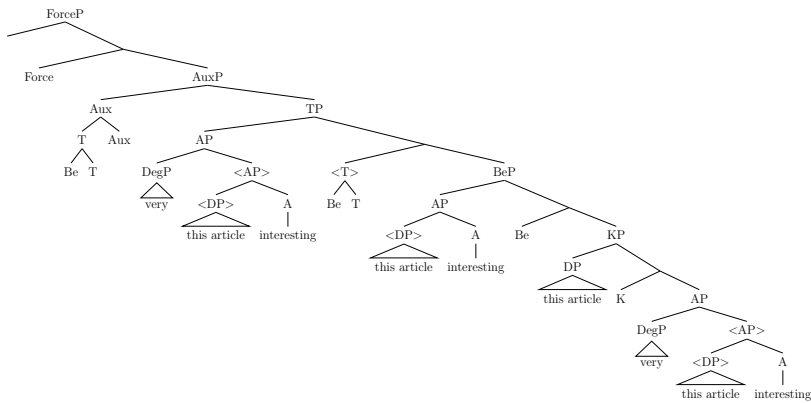
Step 11: external merge of a complementizer *da*'that' in Force
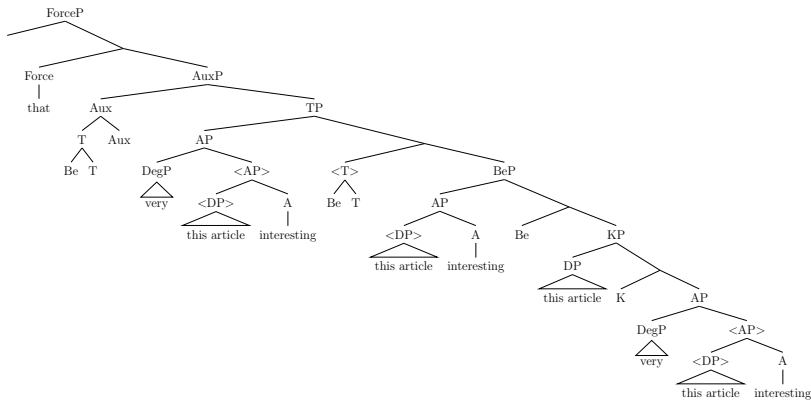
Step 11 completes the derivation of the split pattern in the non-root clause.

Next, I show the derivation of the unsplit pattern.

A.0.2 The unsplit pattern
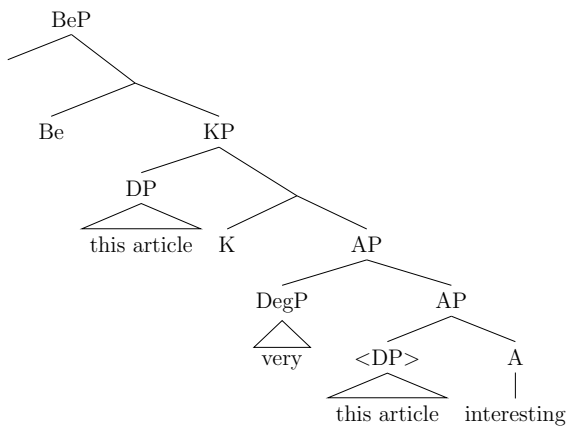
Step 4: **Complex predicate formation**. The *pied-piping* option: the head of the AP pied-pipes the sister of K to spec BeP.

Step 5: external merge of T

TP

T

BeP

AP

DegP
very

AP

<DP>
this article

A
interesting

<Be>

KP

DP
this article

K

<AP>

DegP
very

AP

<DP>
this article

A
interesting

Step 6: internal merge of Be into T

TP

T

Be T

BeP

AP

DegP
very

AP

<DP>
this article

A
interesting

<Be>

KP

DP
this article

K

<AP>

DegP
very

AP

<DP>
this article

A
interesting
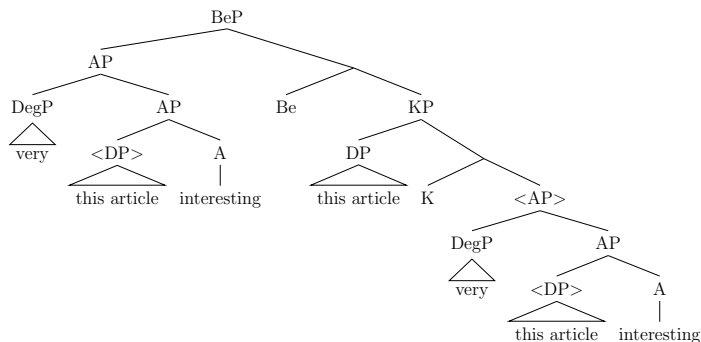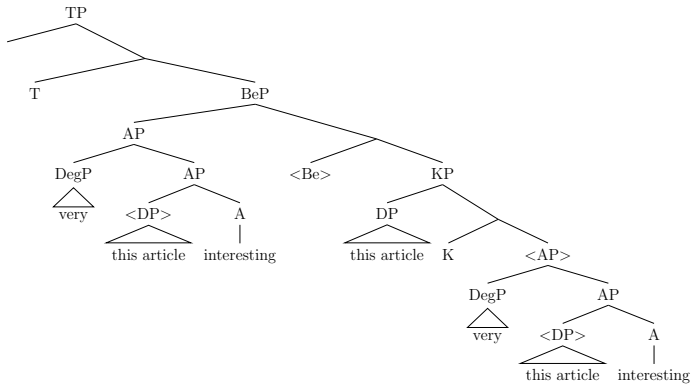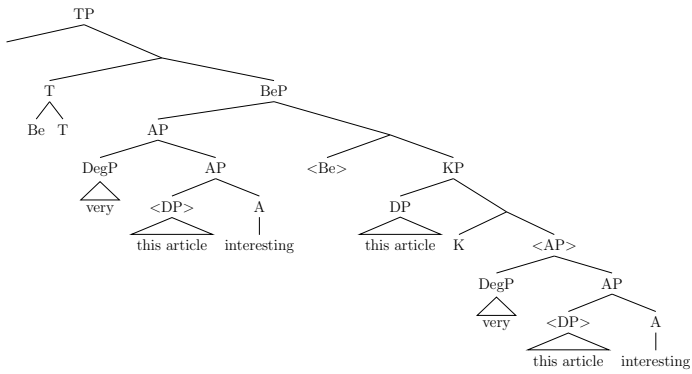
Step 7: **predicate inversion**: the entire AP in spec BeP undergoes inversion to spec TP

TP

AP

DegP
very

AP

<DP>
this article

A
interesting

T

Be T

BeP

<AP>

DegP
very

AP

<DP>
this article

A
interesting

<Be>

KP

DP
this article

K

<AP>

DegP
very

AP

<DP>
this article

A
interesting

Step 8: external merge of Aux

AuxP
Aux   TP
        AP   TP
DegP   AP   T   BeP
very <DP>   A   Be T   <AP>
      this article interesting   DegP   AP   <Be>   KP
                              very <DP>   A   DP   KP
                                    this article interesting   this article K   <AP>
                                                                          DegP   AP
                                                                          very   <DP>   A
                                                                               this article interesting

Step 9: internal merge of T to Aux and spell-out of the Be to T complex as *je*.

AuxP
Aux   TP
T   Aux   AP   TP
Be T   DegP   AP   <T>   BeP
         very   <DP>   A   Be T   <AP>
               this article interesting   DegP   AP   <Be>   KP
                                     very <DP>   A   DP   KP
                                          this article interesting   this article K   <AP>
                                                                                DegP   AP
                                                                                very   <DP>   A
                                                                                     this article interesting

Step 10: external merge of Force

ForceP
Force   AuxP
          Aux   TP
          T   Aux   AP   TP
          Be T   DegP   AP   <T>   BeP
                   very   <DP>   A   Be T   <AP>
                         this article interesting   DegP   AP   <Be>   KP
                                               very <DP>   A   DP   KP
                                                    this article interesting   this article K   <AP>
                                                                                          DegP   AP
                                                                                          very   <DP>   A
                                                                                               this article interesting

Step 11: external merge of *da* 'that' in Force

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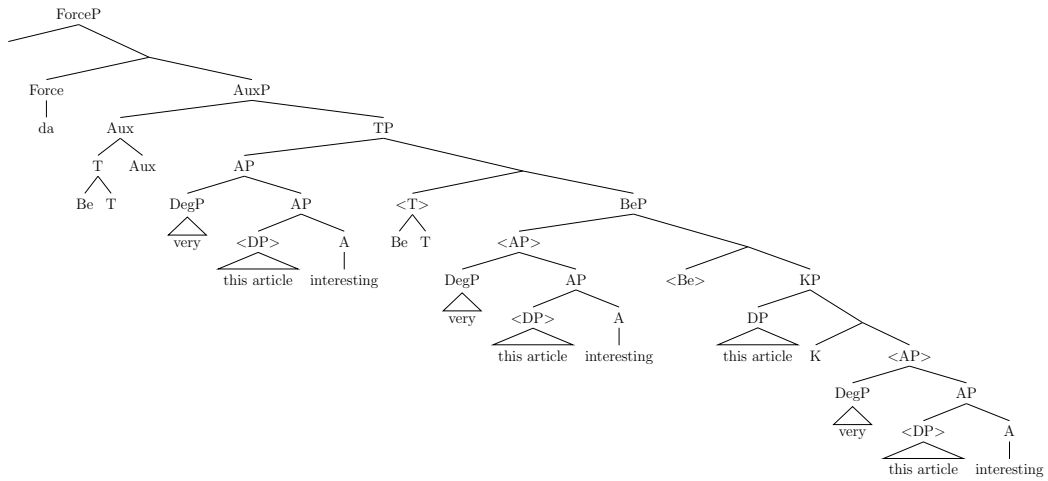
Step 11 derives the unsplit pattern in the non-root clause.

A.0.2.1 The unmodified predicate preposing

In this section I show a derivation of the unmodified predicate in the non-root clause. The datum to be derived is repeated in (3).

(3)   On misli   da je važan   ovaj članak.
        he think..PRS.3SG that be important this article
        'He thinks that this article is important.'

The assumption on the external merge witih the small clause remains the same as before.
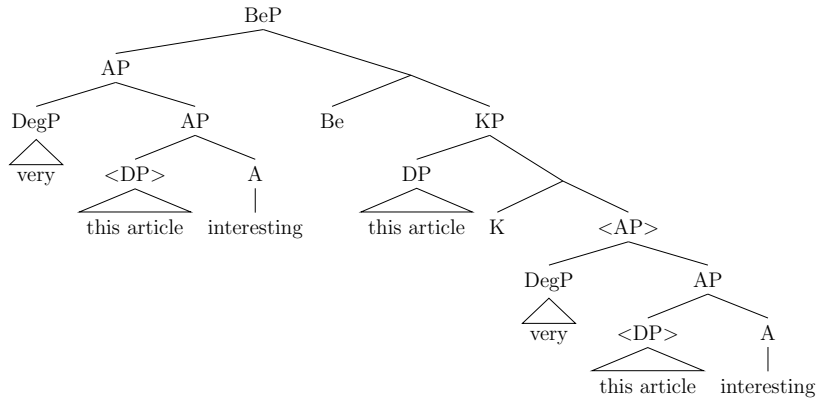
Step 1: external merge of K
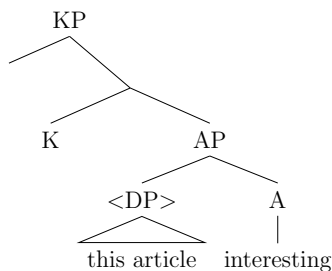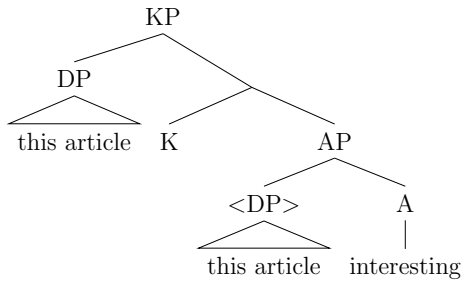
Step 2: internal merge of the DP subject to spec KP

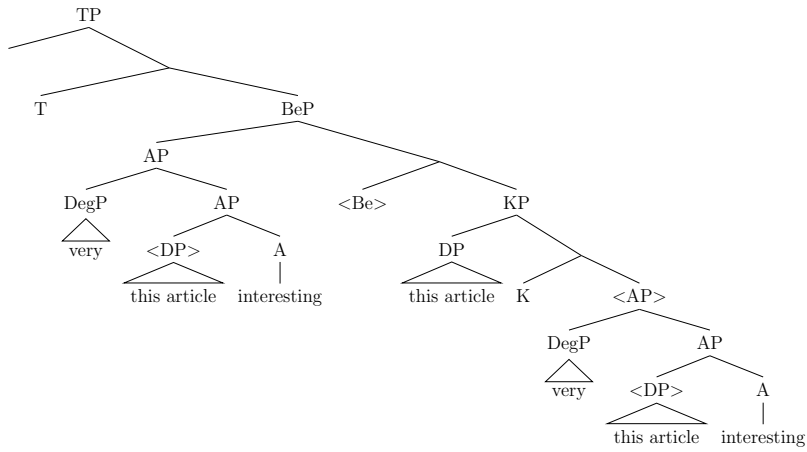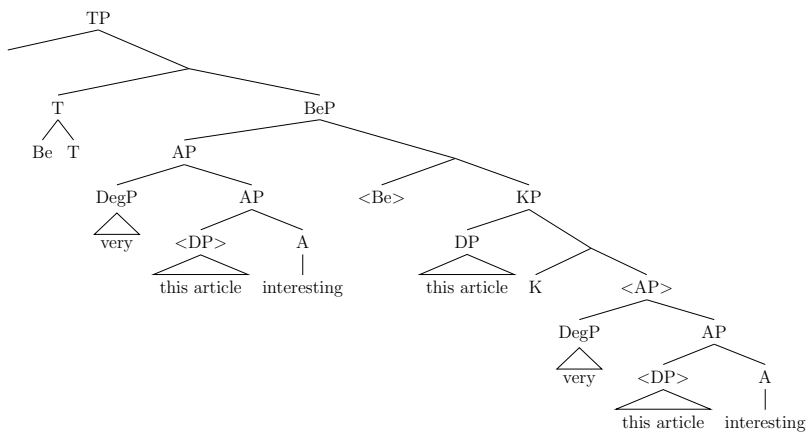Step 3: external merge of Be

Step 4: **complex predicate formation**. The *pied-piping* option: the head of the AP pied-pipes the sister of K to spec BeP

Step 5: external merge of T

TP
├── T
└── BeP
    ├── AP
    │   ├── <DP> (this article)
    │   └── A (interesting)
    └── ...
        ├── <Be>
        └── KP
            ├── DP (this article)
            ├── K
            └── <AP>
                ├── <DP> (this article)
                └── A (interesting)

Step 6: internal merge of Be into T

TP
├── T
│   ├── Be
│   └── T
└── BeP
    ├── AP
    │   ├── <DP> (this article)
    │   └── A (interesting)
    └── ...
        ├── <Be>
        └── KP
            ├── DP (this article)
            ├── K
            └── <AP>
                ├── <DP> (this article)
                └── A (interesting)
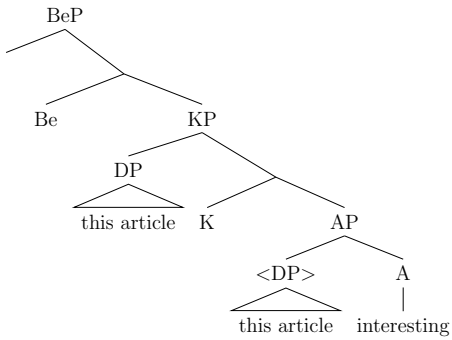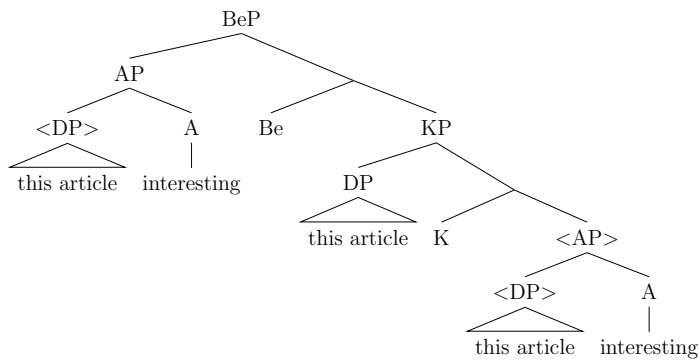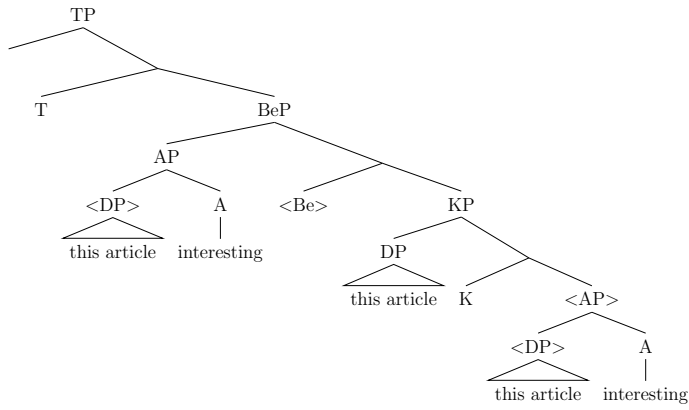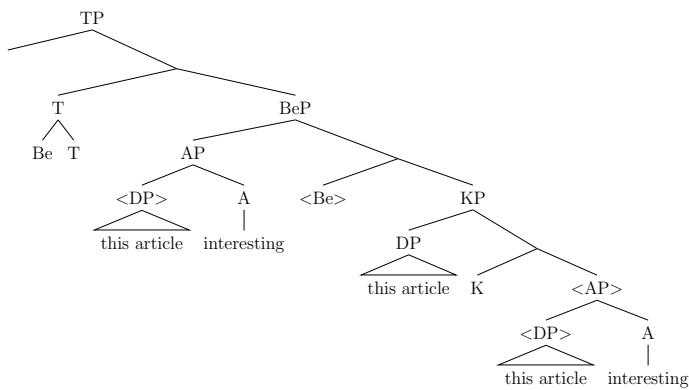
Step 7: predicate inversion. The constituent in spec BeP inverts to spec TP
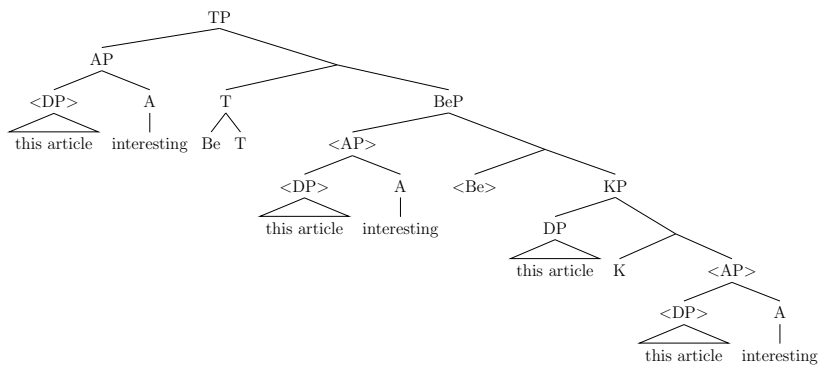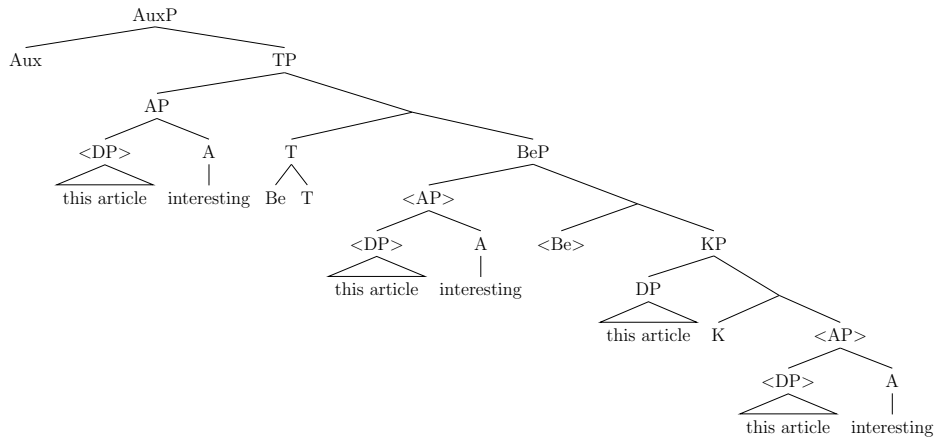
TP
├── AP
│   ├── <DP> (this article)
│   └── A (interesting)
└── ...
    ├── T
    │   ├── Be
    │   └── T
    └── BeP
        ├── <AP>
        │   ├── <DP> (this article)
        │   └── A (interesting)
        └── ...
            ├── <Be>
            └── KP
                ├── DP (this article)
                ├── K
                └── <AP>
                    ├── <DP> (this article)
                    └── A (interesting)

Step 8: external merge of Aux

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Step 9: internal merge of T to Aux and spellout of the Be to T complex as *je*.
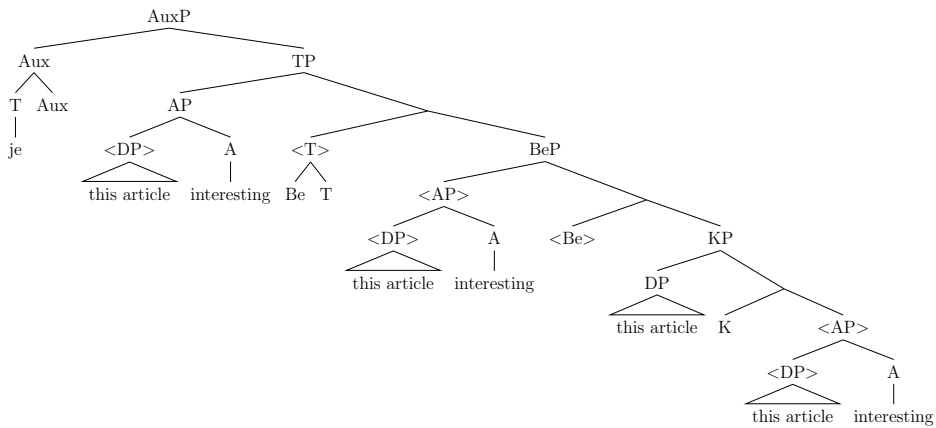
Step 10: external merge of Force
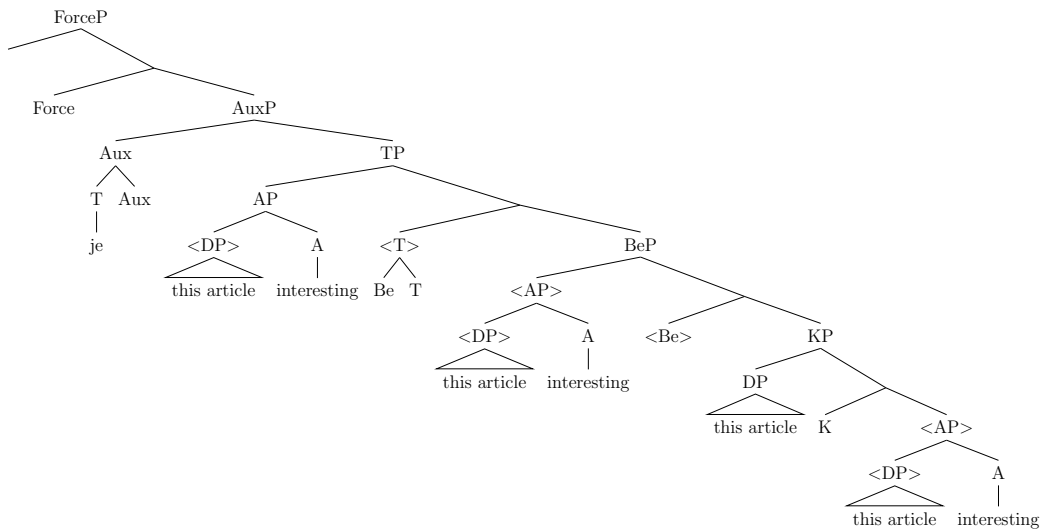
Step 11: external merge of a complementizer in Force
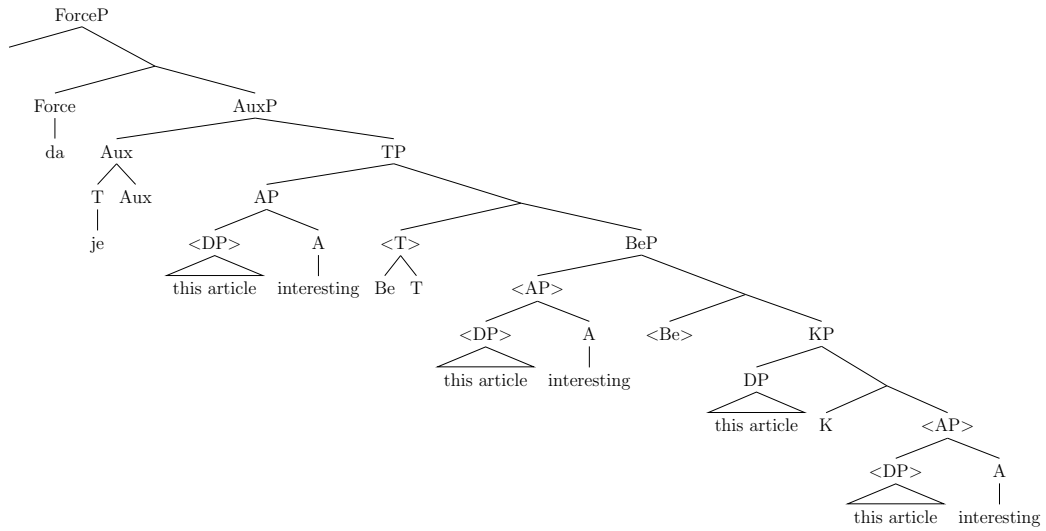
Step 11 derives the unmodified predicate preposing in the non-root clause.

Next, I proceed to the analysis of the patterns of the AP preposing in the root clause.

A.0.2.2   The unsplit pattern

The datum to be derived is, for convenience, repeated in (4).

(4)   Vrlo/skroz   zanimljiv   **je**   ovaj članak.
        very/totally interesting be.PRS.3SG this article
        'This article is very/totally interesting.'

Step 1: external merge of K
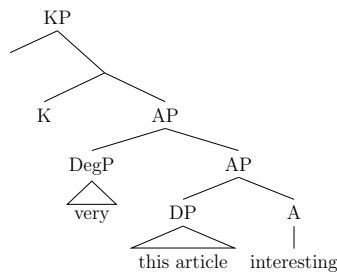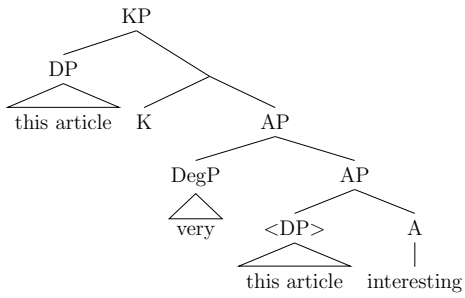
Step 2: internal merge of the DP subject to spec KP

Step 3: external merge of Be
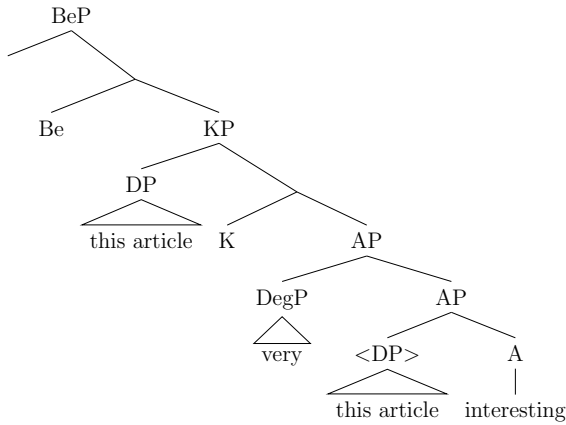
Step 4: **complex predicate formation**. The *pied-piping* option: The head of the AP pied-pipes the highest dominating AP projection (this projection includes the adverb) to spec BeP.

Step 5: external merge of T

TP tree (Step 5 continuation):

```
TP
├── T
└── BeP
    ├── AP
    │   ├── DegP
    │   │   └── very
    │   └── AP
    │   ├── <DP>
    │   │   └── this article
    │   └── A
    │   └── interesting
    └──
        ├── <Be>
        └── KP
            ├── DP
            │   └── this article
            └──
                ├── K
                └── <AP>
                    ├── DegP
                    │   └── very
                    └── AP
                        ├── <DP>
                        │   └── this article
                        └── A
                            └── interesting
```

Step 6: internal merge of Be into T

```
TP
├── T
│   ├── Be
│   └── T
└── BeP
    ├── AP
    │   ├── DegP
    │   │   └── very
    │   └── AP
    │       ├── <DP>
    │       │   └── this article
    │       └── A
    │           └── interesting
    └── 
        ├── <Be>
        └── KP
            ├── DP
            │   └── this article
            └── 
                ├── K
                └── <AP>
                    ├── DegP
                    │   └── very
                    └── AP
                        ├── <DP>
                        │   └── this article
                        └── A
                            └── interesting
```

Step 7: predicate inversion to spec TP

```
TP
├── AP
│   ├── DegP
│   │   └── very
│   └── AP
│       ├── <DP>
│       │   └── this article
│       └── A
│           └── interesting
└── 
    ├── T
    │   ├── Be
    │   └── T
    └── BeP
        ├── <AP>
        │   ├── DegP
        │   │   └── very
        │   └── AP
        │       ├── <DP>
        │       │   └── this article
        │       └── A
        │           └── interesting
        └── 
            ├── <Be>
            └── KP
                ├── DP
                │   └── this article
                └── 
                    ├── K
                    └── <AP>
                        ├── DegP
                        │   └── very
                        └── <AP>
                            ├── <DP>
                            │   └── this article
                            └── A
                                └── interesting
```

Step 8: external merge of Aux

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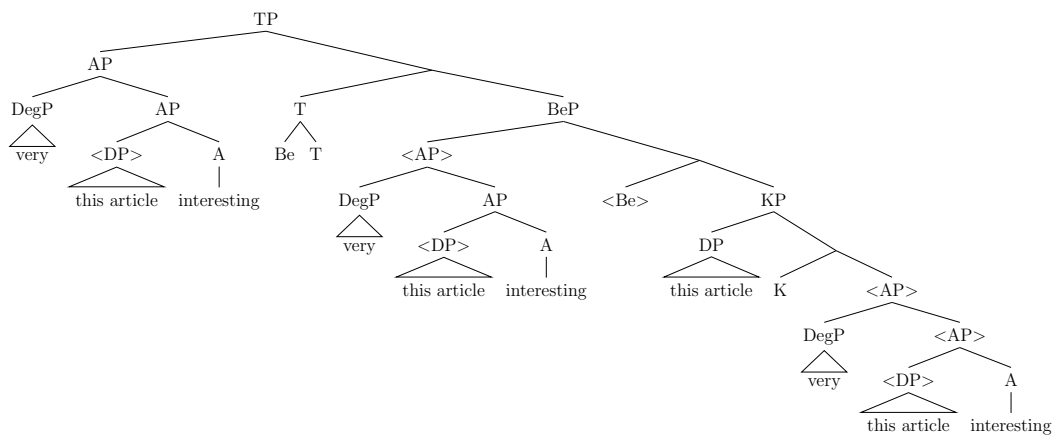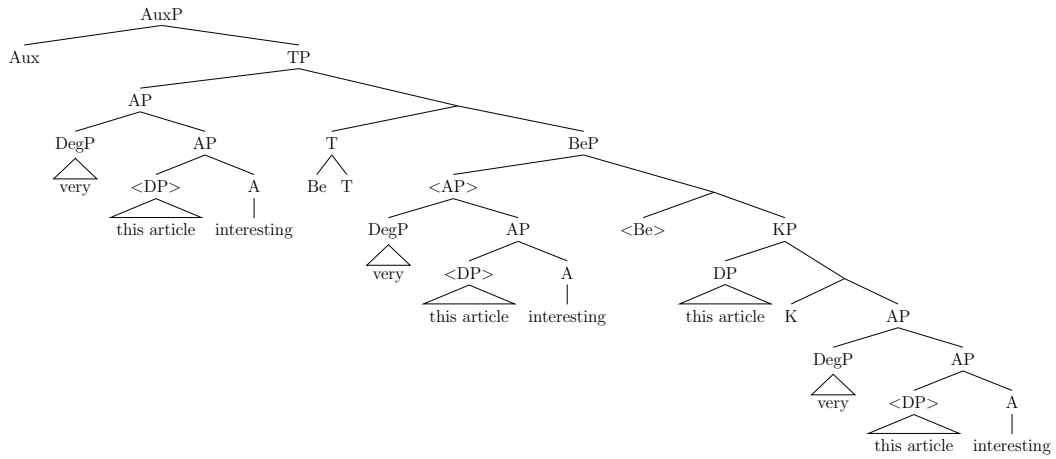
Step 9: internal merge of T to Aux and spellout of the Be to T complex as *je*.
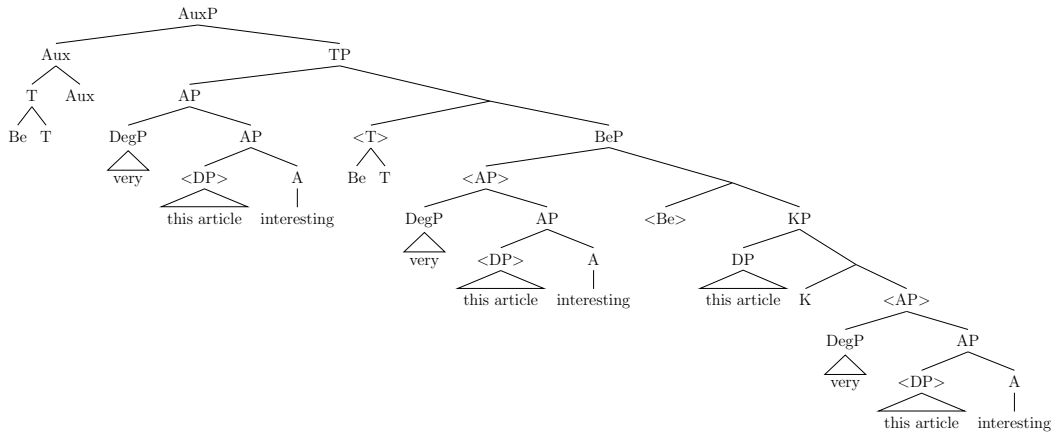
Step 10: external merge of root
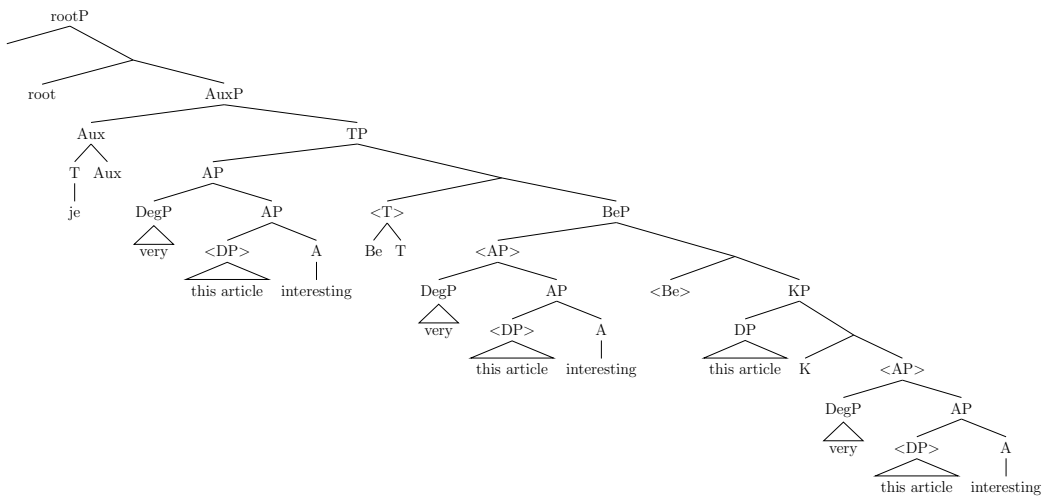
Step 11: internal merge of the closest XP to spec rootP. The closest XP is the AP in spec TP.
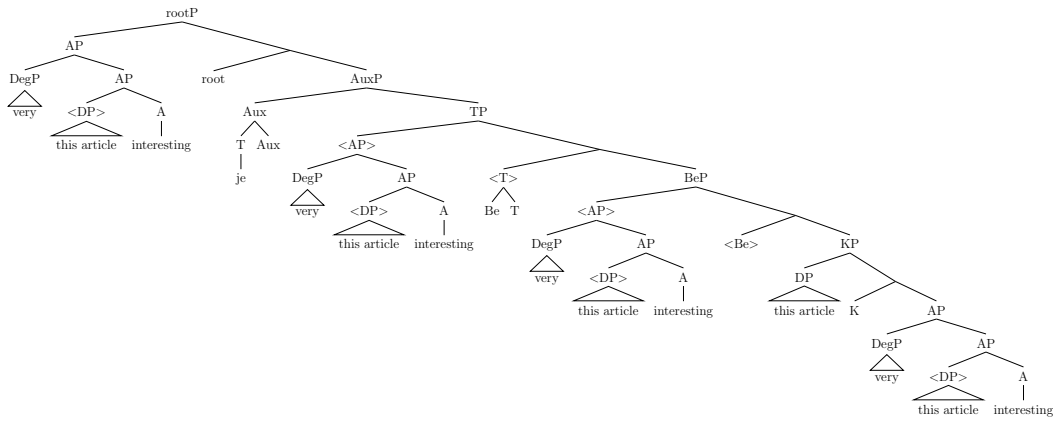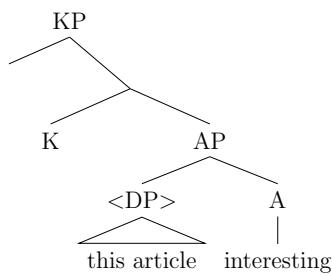
Step 11 derives the unsplit pattern in the root clause. Finally, I proceed to the derivation of unmodified predicate preposing in the root environment.
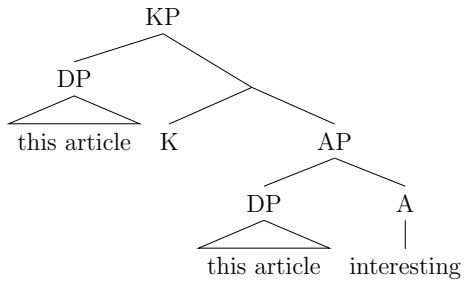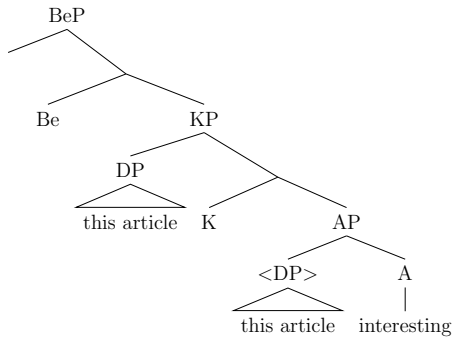
A.0.2.3 The unmodified predicate

The example to be derived is, for convenience, repeated in (5).

(5)   Zanimljiv je   ovaj članak.
       interesting be.PRS.3SG this article
       'This article is interesting.'

Step 1: external merge of K

Step 2: internal merge of the DP subject to spec KP

Step 3: external merge of Be

Step 4: **complex predicate formation**. *Pied-piping* option: The head of the AP pied-pipes the sister of K to spec BeP.
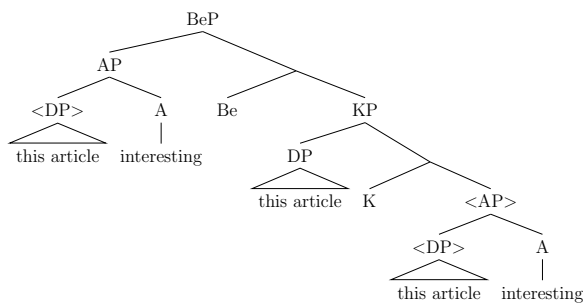
Step 5: external merge of T (show spell out of T as *je*)
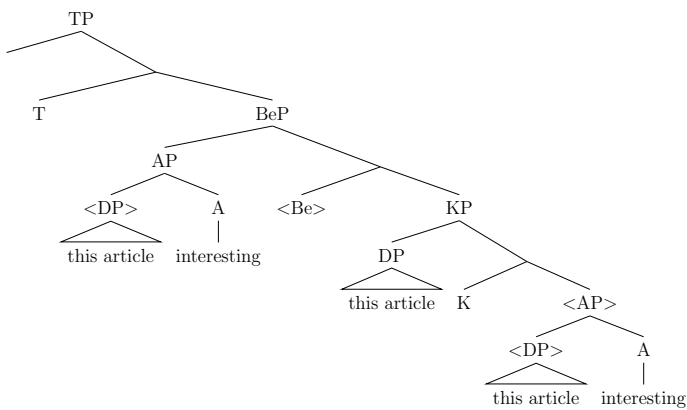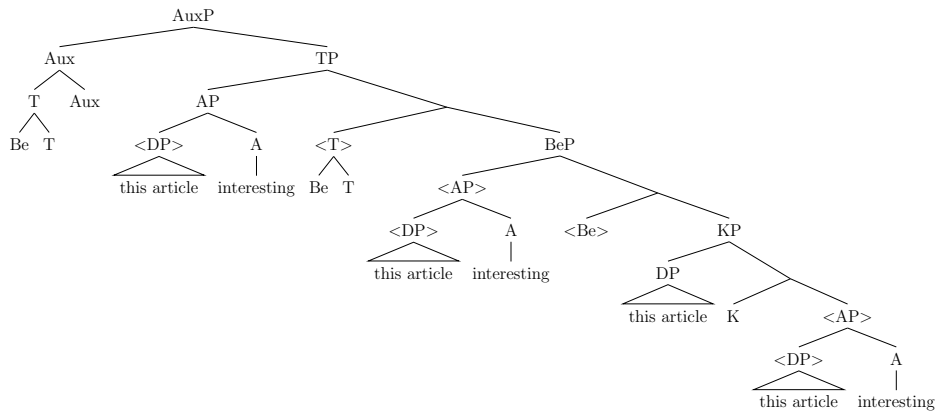
Step 6: internal merge of Be into T
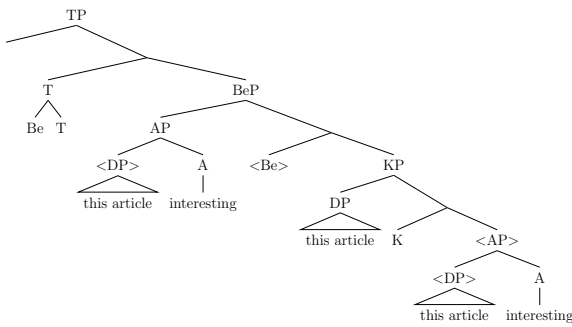
Step 7: **predicate inversion**. The AP in spec BeP undergoes inversion to to spec TP.
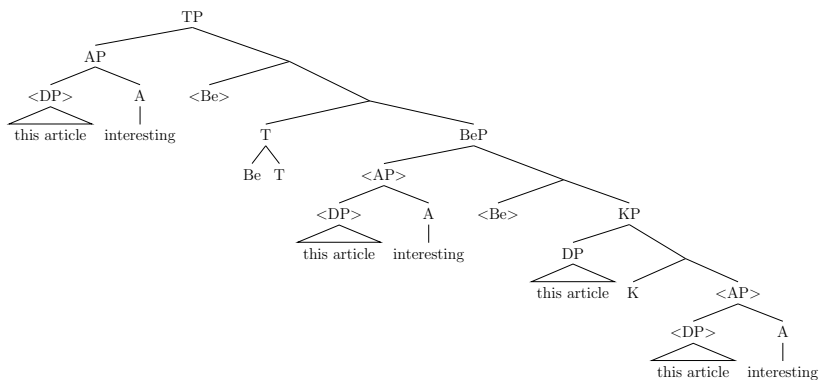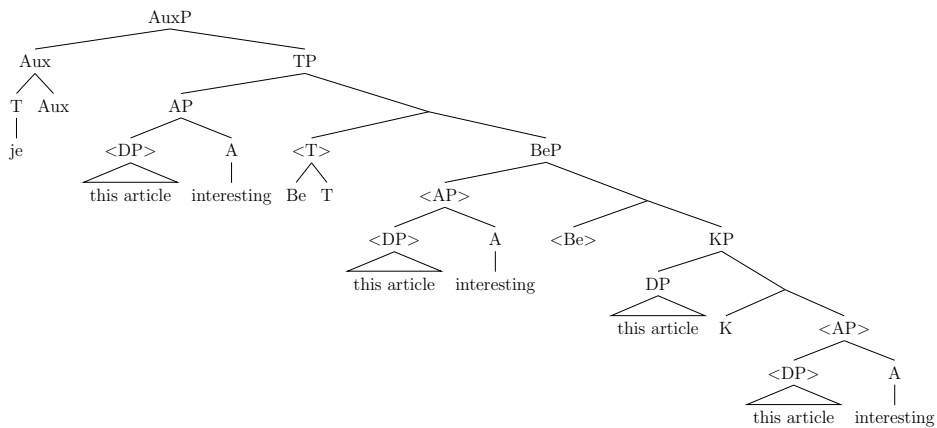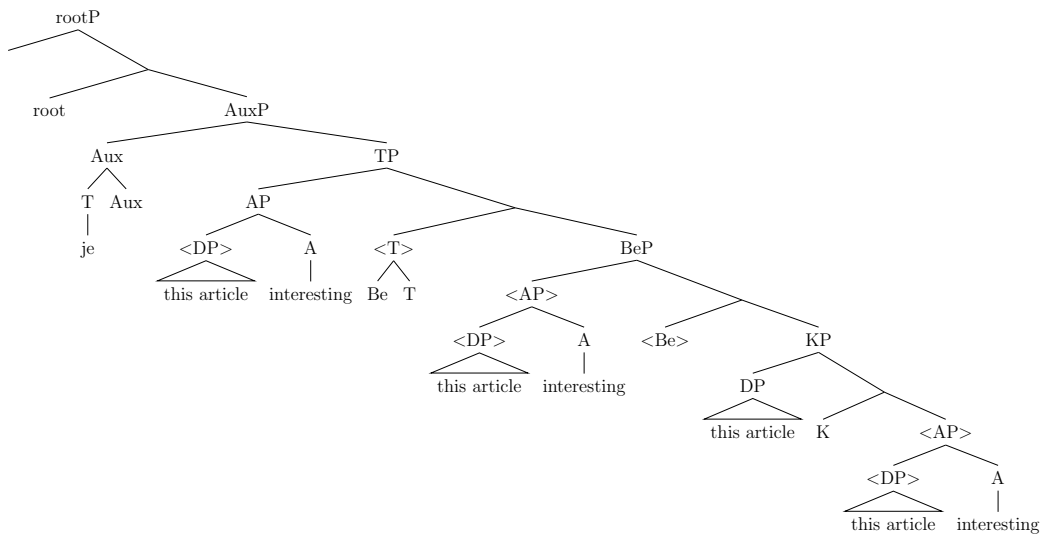

Step 8: external merge of Aux
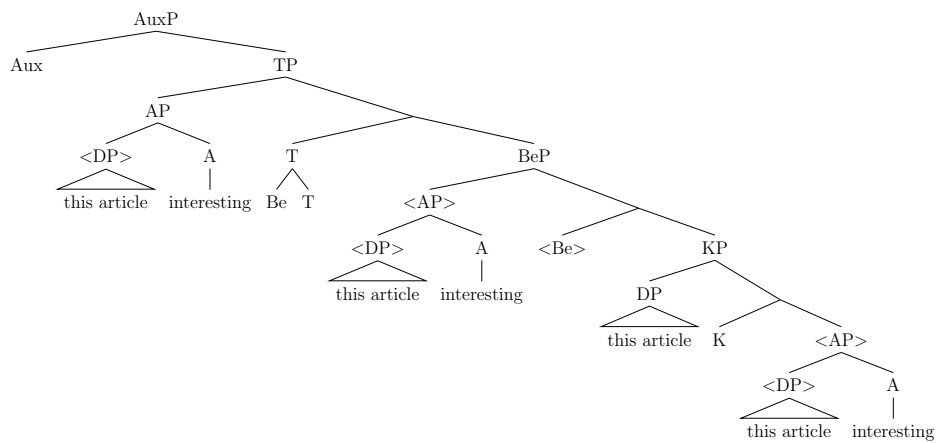
Step 9: internal merge of T to Aux and spellout of the Be to T complex as *je* (spellout not shown below).

AuxP
Aux   TP
T   Aux   AP
Be   T   <DP>   A   <T>   BeP
this article   interesting   Be   T   <AP>
<DP>   A   <Be>   KP
this article   interesting   DP
this article   K   <AP>
<DP>   A
this article   interesting

Step 10: external merge of Force

AuxP
Aux   TP
T   Aux   AP
je   <DP>   A   <T>   BeP
this article   interesting   Be   T   <AP>
<DP>   A   <Be>   KP
this article   interesting   DP
this article   K   <AP>
<DP>   A
this article   interesting

Step 11: external merge of root

rootP
root   AuxP
Aux   TP
T   Aux   AP
je   <DP>   A   <T>   BeP
this article   interesting   Be   T   <AP>
<DP>   A   <Be>   KP
this article   interesting   DP
this article   K   <AP>
<DP>   A
this article   interesting

Step 12: internal merge of the closest XP to spec rootP. The closest XP is the AP in spec TP.
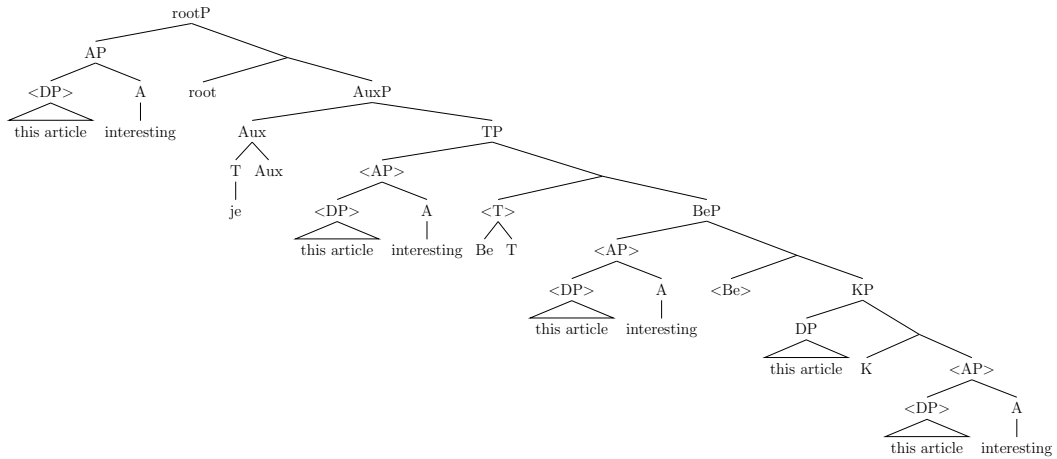
Step 12 derives the linear order with the preposed unmodified predicate.
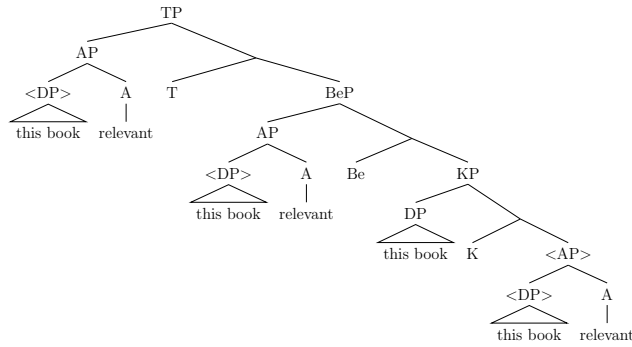
- Zamjenik svojeg∗$_i$ bivšeg šefa je novi dekan$_i$.
  deputy   self   former boss be new dean
  intended: 'A new dean is a deputy of his former boss.'

- Novi dekan$_i$ je zamjenik svojeg$_i$ bivšeg šefa.
  new dean   be deputy   self   former boss
  'A new dean is a deputy of his former boss.'

For the purpose of predicate inversion, a sister of K is a *predicate* which inverts to spec TP, as shown in (6).
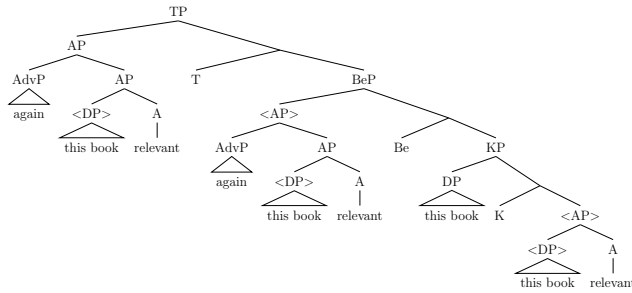
(6)
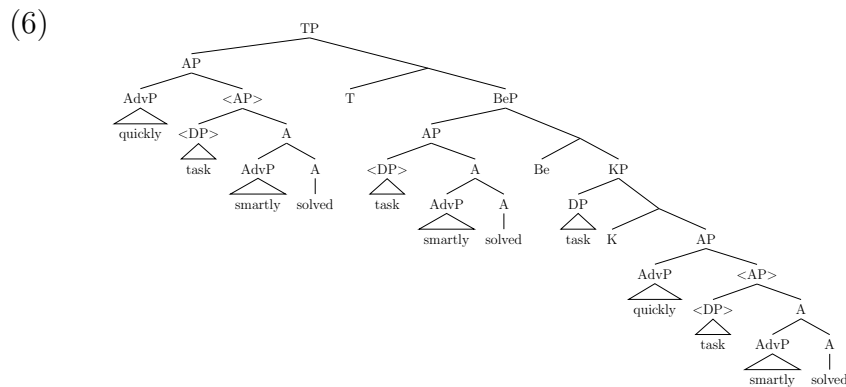
as shown in (7), with unmodified and in (8), with modified APs.

(7)

```
                        TP
          AP
    <DP>      A      T              BeP
  this book  relevant          AP
                          <DP>      A   Be        KP
                        this book relevant    DP
                                          this book  K      <AP>
                                                          <DP>      A
                                                        this book  relevant
```

(8)

```
                        TP
          AP
   AdvP       AP       T                  BeP
  again  <DP>    A              <AP>
       this book relevant   AdvP    AP      Be        KP
                           again <DP>   A         DP
                               this book relevant this book  K      <AP>
                                                              <DP>      A
                                                            this book relevant
```

To disambiguate between the two possible merge positions of the manner adverb, I add a *ponovno* 'again' which, as we have established above, occurs adjoined to AP. (9) shows that a preposed DP subject can follow *again* suggesting it must be in a position lower than 'be'.

(9) da   su   **ponovno** studenti **dobro** svi odradili   posao.
     that be.PRS.3PL again   students well   all do.PTCP.M.PL job
     '...that all students did the job well again.'

The projection hosting the subject which is lower than 'be' is compatible with the KP. Since the quantifier is stranded from a position lower than KP suggests that the stranded quantifier must be in another subject position lower than the KP. The only such position is the external merge position of the subject in a small clause. If the quantifier is stranded from within the AP, then *dobar* 'well', which immediately precedes it must be adjoined to the small clause.

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